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Prehistory Research Series

THE BELL-PHILHOWER SITE SUSSEX COUNTY NEW JERSEY

By

WILLIAM A. RITCHIE

Rochester Museum of Arts and Sciences

INDIANA HISTORICAL SOCIETY

INDIANAPOLIS

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GAYLE THORNBROUGH, *Editor*

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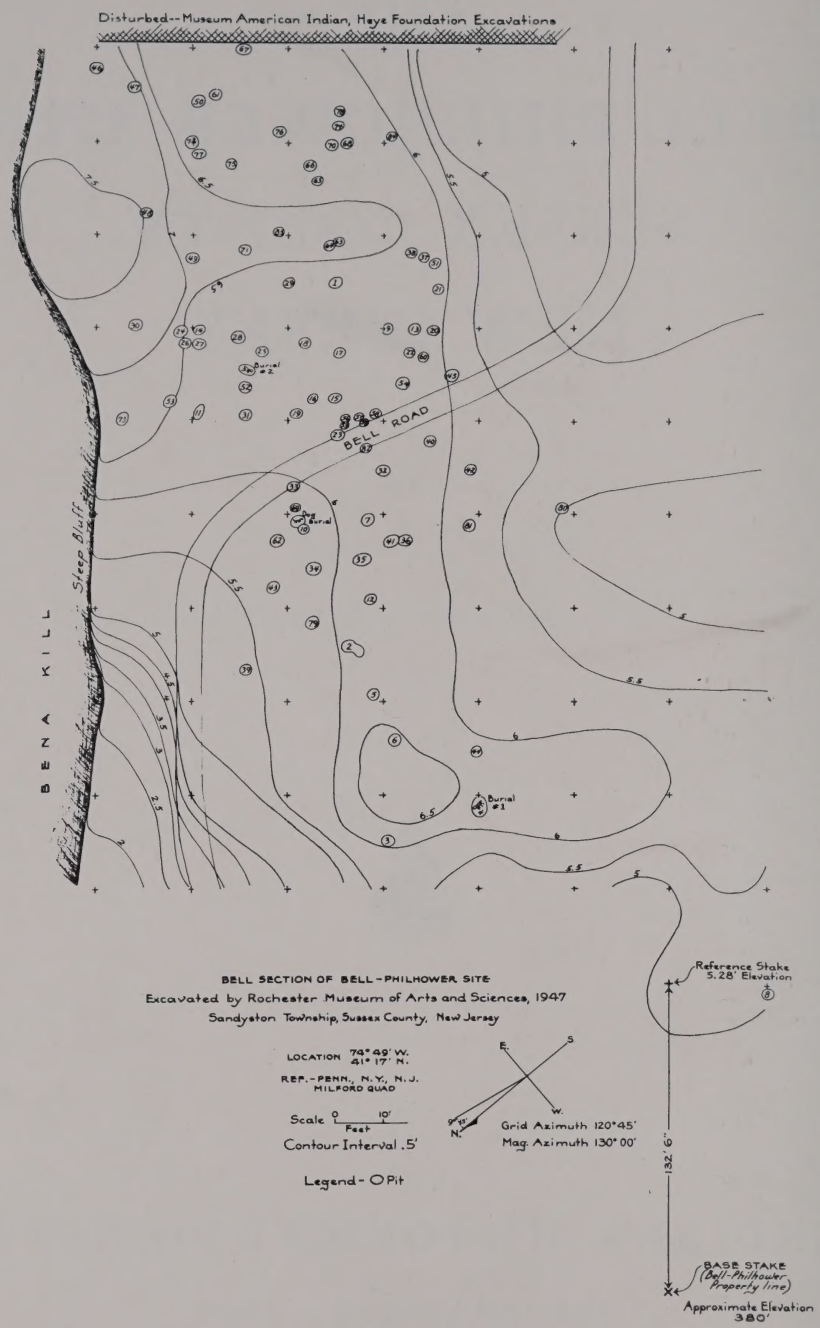

BELL SECTION OF BELL-PHILHOWER SITE

Excavated by Rochester Museum of Arts and Sciences, 1947

Sandyston Township, Sussex County, New Jersey

LOCATION 74° 49' W.
41° 17' N.

REF.-PENN., N.Y., N.J.
MILFORD QUAD

Scale 0 10' Feet

Contour Interval .5'

Legend- O Pit

E. S. W.

9° 45' N.

Grid Azimuth 120° 45'

Mag. Azimuth 130° 00'

PLATE 1

PREFACE

For a number of years the Indiana Historical Society has concerned itself with the difficult problems surrounding the interpretation, as an historical document, of the Walam Olum or traditional migration record of the Lenni Lenape or Delaware Indians, whose early historic homeland centered in the present state of New Jersey.[1] In this research the several approaches of anthropology—the historical, linguistic, ethnological, somatological, and archaeological—have in varying degrees been enlisted.[2] The work herein described constituted that part of the archaeological investigation entrusted, under a grant from the Indiana Historical Society, to the Rochester Museum of Arts and Sciences in the summer of 1947.

With the consent of the New Jersey State Museum, and by mutual agreement of all concerned, the Munsee area of the Delaware, with its probable nucleus in Sussex County, New Jersey, was selected for our operations. On July 2, 1947, the party comprising Edmund S. Carpenter, University of Pennsylvania; David W. Chase, Rochester Museum of Arts and Sciences; Dr. Vernon Leslie, Honesdale, Pennsylvania; Dr. Catherine McCann, of the New Jersey State Museum (for a period of two weeks); and the writer, who was in charge, entered the field, remaining until August 20.

Through prior arrangements made in June by Messrs. Carpenter and Leslie, the extensive site on the Charles A. Philhower property, near the hamlet of Montague, Sandyston Township, Sussex County, New Jersey, which is contiguous with the equally well-known site on the Burson W. Bell farm, became the first locus of excavation and the base of operations. Later a lease obtained from Mr. Bell permitted the transfer of excavations to his land. From this field camp, also, were conducted reconnais-

[1]Brinton, Daniel G., *The Lenapé and Their Legends* (Philadelphia, 1885), pp. 148-217.

[2]Lilly, Eli, "Tentative Speculations on the Chronology of the Walam Olum and the Migration Route of the Lenapé," in *Proceedings of the Indiana Academy of Science*, 1944, XLIV(1945), 33-40.

sances and minor excavations on neighboring Minisink Island, and on several lesser sites up and down the Delaware River between Port Jervis, New York, and the Delaware Water Gap in New Jersey, with results subsequently to be described.

This work was made possible by the generosity and courteous co-operation of many people. Our hearty thanks are extended to all, and in particular to the following: the Indiana Historical Society for its financial grant; Dr. James B. Griffin, University of Michigan, who made initial arrangements for getting the various parties into the field; and Mr. and Mrs. Charles A. Philhower, of Westfield, New Jersey, who made available without cost both digging privileges and a delightful camp site, and who also contributed in many ways to our comfort and efficiency.

Reconnaissance and lesser excavations were made with the kind consent of the following persons: Mr. Rudolph Ludwig, part owner and leaseholder of Minisink Island, Mr. James Welling, and Mr. Fred Waring.

Several of the numerous visitors volunteered their services in the more laborious aspects of the digging and their aid is gratefully acknowledged. Mr. Walter E. Franke, member of the Massachusetts Archaeological Society and summer resident, helped on several sites. He and Mrs. Franke also rendered other friendly services. Mr. James Shafer, member of the New York State Archeological Association, spent a few days with us on the Bell Site, and Messrs. John and Thomas Kuhn, of Upper Montclair, New Jersey, helped with the excavations on the occasion of their visits.

William A. Ritchie, Archaeologist,
Rochester Museum of Arts and Sciences

April, 1949

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HISTORICAL INTRODUCTION

Since the broader historical aspects of the Munsee problem will be treated separately by Edmund S. Carpenter, only a brief reference need here be made to the meager records concerning the Bell-Philhower Site.

According to Van der Donck[3] and Ruttenber,[4] Minisink, the land of the Minsi (later Munsee), embraced, at the dawn of the historical period, the area of the Upper Delaware River and its tributaries, including what is now the southwestern part of Orange and Ulster counties, New York, and northwestern New Jersey. The principal village, known as Minisink, appears to have been situated in Sussex County, New Jersey, in the approximate locality of the Bell-Philhower Site.[5]

Another identification is said to occur on a map of 1747, showing the Indian town of Minisink situated on the Delaware River opposite a large island of the same name, and at the western terminus of a trail called the "Minisink Path," beginning at Navesink, just south of Sandy Hook.[6]

Further implied testimony in support of this locus as the capital town site is contained in Capt. Arent Schuyler's Journal of February, 1693 or 1694, which places the Munsee village on the Delaware River, half a day's journey on foot from the Neversink River.[7] The Bell-Philhower Site is about seven miles below Port Jervis which is near the confluence of the Neversink and the Delaware.

Abundant archaeological evidence, too, proves the former existence here on the broad sand plain, some 40 feet above the

[3]Van der Donck, Adriaen, "A Description of the New Netherlands . . .," in New York Historical Society *Collections*, 2 series, I(1841), 125-242.

[4]Ruttenber, Edward M., *History of the Indian Tribes of Hudson's River* . . . (Albany, 1872), p. 96.

[5]On the Van der Donck map of 1656 a town at or near this point on the river is designated as "*t' Schichte Wacki*," the meaning of which is unknown.

[6]Heye, George G., and Pepper, George H., *Exploration of a Munsee Cemetery near Montague, New Jersey* (Museum of the American Indian, Heye Foundation, *Contributions*, II, No. 1, New York, 1915), p. 11.

[7]O'Callaghan, Edmund B. (ed.), *Documents Relative to the Colonial History of New York* . . . (15 volumes. Albany, 1856-87), IV, 98-99.

river, of a large settlement, both in prehistorical and historical times. There was apparently a continuous or nearly continuous occupation over many generations, during the course of which, as indicated by overlapping pits of different ages, there occurred some shifting of population over the entire area of about seven acres comprised in the habitation zone of the Bell-Philhower Site. Data also exist to show that the lower end of Minisink Island lying just across the Bena Kill, the cut-out meander of the Delaware which separates the island from the bluff-top site which is being described, was also contemporaneously occupied. Probably its relatively low elevation, only some 15 feet above normal water level, which admitted of occasional flooding, prevented it from becoming the permanent abiding place of a large population.[8]

Although no archaeological traces have been reported, historic records suggest that in 1663 the town was palisaded as protection against the marauding Iroquois.[9]

Soon after 1700, according to the accounts, white farmers were in possession of the land lying immediately to the east of the site, along both banks of the small brook forming the present eastern boundary of the Bell farm.[10] Bell's original land tract, embracing considerably more than the whole of the site in question, was deeded to his maternal ancestor, Johannes Westbrook, by the Munsee in 1730. The document bears the signature of an Indian named Syacop, and is still in Bell's possession.

Following the infamous Treaty of Lancaster in 1744, the remaining Delaware inhabitants of the valley are said to have been ordered out by the Iroquois to temporary homes on the latters' land at Shamokin and Wyoming, on the Susquehanna River. Thus began the Via Dolorosa of this unhappy people whose remnants still abide among alien tribes chiefly in Oklahoma and

[8]Major floods have swept over most of the island in 1888, 1903, and 1936.

[9]O'Callaghan (ed.), *Documents*, XIII, 290. Sauthier's map of 1779 also raises this possibility. *A Chorographical Map of the Province of New-York in North America* (London, 1779).

[10]Heye and Pepper, *Exploration of a Munsee Cemetery*, pp. 4-6.

Ontario, Canada.[11] These, and other fragmentary data, seem sufficient to establish the Bell-Philhower Site as the location of the historic Munsee town of Minisink, and probably the prehistoric capital of this people as well.

[11]Brinton, *The Lenapé and Their Legends*, pp. 122-26; Heckewelder, John, *History, Manners, and Customs of the Indian Nations Who Once Inhabited Pennsylvania and the Neighbouring States* (Historical Society of Pennsylvania, *Memoirs*, XII, Philadelphia, 1876), pp. 83-85; Hodge, Frederick Webb (ed.), *Handbook of American Indians North of Mexico* (U. S. Bureau of American Ethnology, *Bulletin 30*, 2 volumes. Washington, D. C., 1907, 1910), I, 385-86.

ARCHAEOLOGICAL CULTURES OF THE MINISINK ISLAND AREA

Our knowledge of the Indian occupations of the Delaware Valley in northern New Jersey comes principally from the investigations of Schrabisch,[12] Heye and Pepper,[13] Philhower,[14] Cross,[15] and Leslie.[16] On the basis of these data, both from excavations and surface collections, it is feasible, by comparison with the established cultural sequence and typology for the adjacent portion of New York state,[17] to draw certain conclusions respecting the succession and extent of occupations in this portion of the Delaware Valley.

Leslie's careful analysis of surface collections from the area between Point Mountain, Delaware County, New York, and Bushkill, Pike County, Pennsylvania, has led him to believe that four occupations are represented; namely, the Laurentian, Early Coastal, Owasco, and Iroquois.[18] In the Milford, Pennsylvania, region he finds a quantitative shift in the direction of increasing Coastal and decreasing Laurentian elements, "while Owasco and Iroquois occupations are much more evident here than in the region above."[19]

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[12]Schrabisch, Max, *Indian Habitations in Sussex County, New Jersey* (Geological Survey of New Jersey, *Bulletin 13*, Trenton, 1915).

[13]Heye and Pepper, *Exploration of a Munsee Cemetery*. Some of the material has been seen by the author.

[14]Through Mr. Philhower's courtesy, his large collection from the Philhower Site and Upper Delaware Valley were studied in November, 1947.

[15]Cross, Dorothy, *Archaeology of New Jersey, Volume One* (Archaeological Society of New Jersey and the New Jersey State Museum, Trenton, 1941), pp. 132-52.

[16]Leslie, Vernon, "An Archaeological Reconnaissance of Upper Delaware Valley Sites Between Point Mountain and Bushkill, Pa.," in *Pennsylvania Archaeologist*, XVI(1946-47), 20-30, 59-78, 95-112, 131-41. The author is indebted to Dr. Leslie for the privilege of seeing his well-organized collections at Honesdale, Pennsylvania, in August, 1947.

[17]Ritchie, William A., *The Pre-Iroquoian Occupations of New York State* (Rochester Museum of Arts and Sciences, *Memoir No. 1*, Rochester, 1944).

[18]Leslie, "An Archaeological Reconnaissance of Upper Delaware Valley Sites," in *Pensylvania Archaeologist*, XVI, 138.

[19]*Ibid.*, XVI, 134.

The writer is in substantial agreement with Leslie's conclusions, except that he would regard the "Iroquois" as an intrinsic and final stage of the Owasco occupation, and he believes that the observed concentration of Owasco and "Iroquoian" remains in the Minisink Island section coincides respectively with the concentration of prehistoric and protohistoric Munsee habitation of this nuclear location in their territorial range. Excavations between Milford and Port Jervis on both sides of the valley will, he suspects, reveal more sites productive of lesser quantities of these kinds of pottery, as suggested by the preliminary work of our survey.[20] Furthermore, to Leslie's cultural inventory the author would now add traces of the Archaic period Lamoka Focus and of the Middlesex and Point Peninsula Foci of the Early and Middle Woodland time periods, respectively.

Apart from Leslie's collections, described in his articles above referred to, the recently seen evidence in support of his conclusions and my additions consist, very briefly, of the following data: a beveled adze and a number of narrow-bladed, stemmed, and side-notched points, some of deeply weathered argillite, typical of the Lamoka Focus, from sites on the Pennsylvania shore opposite the north end of Minisink Island.[21]

The much more numerous broad-bladed, heavy projectile points, both stemmed and side-notched types; large stemmed scrapers; and a trapezoidal bannerstone from the north end of Minisink Island, are all characteristic of the Laurentian Phase.[22]

Also indicative of this occupation are two ulo fragments, three large stemmed scrapers, and several broad, side-notched points,

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[20]On the Welling Site, immediately south of the Rock View House golf links, on the New Jersey side of the Delaware, our party found traces of a camp or village site. From a circular pit, 3 feet 8 inches in diameter and 3 feet in depth, we recovered most of the sherds of a Castle Creek pot of Owasco Herringbone type (Plate 23), together with 4 broad triangular arrow points, an end scraper, a notched flat pebble hammerstone, and refuse including chips of red and yellow jasper.

[21]This, and much material subsequently mentioned, is in the collection of Rudolph Ludwig, who granted me the privilege of studying it in August, 1947.

[22]In the Ludwig collection.

found on the Black farm, on the New Jersey side of the river, about one-third of a mile east of the Bell Site.[23]

Artifacts perhaps ascribable to the Red Valley Focus, Coastal Aspect, in New Jersey, are present in some numbers in the Minisink Island district. They comprise seven fully grooved axes from the Pennsylvania mainland opposite Minisink Island[24] and three mentioned by Heye and Pepper from the Bell Site.[25] From the same sites came much-weathered shale and argillite projectile points of several types, including both narrow- and broad-bladed stemmed, broad-bladed side-notched, and narrow lozenge-shaped specimens. The rare steatite potsherds may also pertain to this horizon.

Cultures of the Intermediate or Early and Middle Woodland periods are very meagerly represented in the whole area, the best evidence known to the author consisting of a recently excavated Middlesex period burial site;[26] of large fragments of a decorated antler comb of classic late Point Peninsula type, found in a calcined condition associated with burned bones, probably human; two perforated shark teeth; and a fragmentary straight-based platform pipe, found in a pit of singular nature on Minisink Island.[27]

Broad, thin, semilozenge-shaped points and scrapers of chert, jasper, and argillite—surface finds between Minisink Island and Port Jervis—have typological affinities with the early Point Peninsula complex in New York, but their Pennsylvania and New Jersey associations are unknown.[28]

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[23]The author is obliged to Harold E. Thompson, of Westfield, New Jersey, for the privilege of seeing these pieces.

[24]In the Ludwig collection.

[25]Heye and Pepper, *Exploration of a Munsee Cemetery*, p. 71.

[26]"Notes and News, Northeastern Area," in *American Antiquity*, XIV (1948-49), 77.

[27]In the Philhower collection.

[28]There are several in the Ludwig collection and more than fifty in the Philhower collection.

PRIOR EXCAVATIONS ON THE BELL-PHILHOWER SITE

Preceding our party on the Bell-Philhower Site were a number of excavators, the earliest apparently being Dr. Maxwell Somerville, professor of classical studies at the University of Pennsylvania, whose finds, made in 1899, are said to have been deposited in the Museum of Science and Art of the University of Pennsylvania.[29] Some ten years later Dr. Edward S. Dalrymple, a Branchville, New Jersey, physician, dug out approximately 15 burials in the northwestern quarter of the site. Such grave goods as occurred are said to have pertained to the full historical period, thus linking these burials with the cemetery excavated by Heye and Pepper in 1914.[30] A second expedition from the Museum of the American Indian, Heye Foundation, under the direction of Edwin Coffin, did some excavating on the Bell farm in 1925, but nothing concerning this work has been published.[31]

On the western portion of the site, owned since 1922 by Charles A. Philhower, of Westfield, New Jersey, very extensive excavations have been conducted by him every summer until recent years. He has opened some 200 pits and between 175 and 200 graves, chiefly grouped in three cemeteries, two of which occupied adjacent knolls forming part of the sand ridge lying at this point some 30 yards back from (southwest of) the bluff overlooking the Bena Kill, while the third was located on the plain close to the bluff edge.

The principal resultant of all this digging in one of the richest Indian sites in New Jersey is a large collection of artifacts owned, respectively, by the Museum of the American Indian, Heye Foundation, and Philhower, plus an important skeletal series,

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[29]Inquiries directed to the University Museum brought a reply from Miss H. Newell Wardle to the effect that this collection could not at present be located for study.

[30]Heye and Pepper, *Exploration of a Munsee Cemetery*.

[31]George G. Heye, in a letter to the author on January 16, 1948, stated that only some "sketch-like notes" made at that time still survive and doubted that these would be of much use.

now in the United States National Museum, the gift of the Heye Foundation.[32]

The physical anthropological material recovered by the Heye and Pepper expedition of 1914 was derived from 68 burials in the eastern section of the site, 17 of which were flexed, 28 extended, one a bundle, and 22 indeterminate through disturbance or advanced decay. Of the flexed inhumations (all adult), 10 were unaccompanied by mortuary offerings, while of the 7 so provided 4 had historic period goods and 2 had articles quite possibly of prehistoric age (bear tooth, rock crystal). On the contrary, the majority (17) of the extended burials were attended by furnishings, in 14 instances (5 adult, 9 immature) pertaining to the historical period, and in only 3 cases (2 adult, 1 immature) of possible precontact age (piece of limestone, piece of stone, both probably fortuitous inclusions; flaking tools and bone awl).[33]

It therefore seems probable that the majority of the flexed burials belong, like the pits next to be mentioned, to the prehistoric phase of occupation, represented by our finds, and with few exceptions, those of Philhower as well.

An unstated number of pits were found by Heye and Pepper scattered at random throughout the cemetery area, some close to, others remote from the graves. These so-called "feast pits" they regard as suggestive of the "performance of a feast ceremony as part of the mortuary rites,"[34] since they commonly contain charcoal, refuse animal bone, and mussel shells. Heye and Pepper's partial analysis shows that in 19 cases they also produced pottery fragments, and the finding of stone and bone artifacts therein is mentioned incidentally in the description of the artifacts.[35] Since apparently no articles of historical provenience came from the pits, their precontact age seems established, and they doubtless represent an eastward continuation of the similar features found

[32]This skeletal series has been described by Aleš Hrdlička in *Physical Anthropology of the Lenapé or Delawares, and of the Eastern Indians in General* (U. S. Bureau of American Ethnology, *Bulletin 62*, Washington, D. C., 1916).

[33]Heye and Pepper, *Exploration of a Munsee Cemetery*, table opposite p. 30.

[34]*Ibid.*, p. 59.

[35]*Ibid.*, pp. 58-75.

by Philhower on his land and by us in the western part of the Bell field.

Although a short description of the nonburial artifacts is given in the Heye Foundation report, it is quite impossible to determine their associations, an especially unfortunate fact in the case of the pottery, which the authors differentiate into Algonquian, Iroquois, and a combination of these two types. Obviously they consider the total remains—burials of all types, pits and their contents, and scattered artifacts—to pertain to a single component, relating to one time period and ethnic group; namely, the historic Munsee, a conclusion which is not sustained by the new evidence.

The approximately two hundred pits found by Philhower closely paralleled in character and content those found by Heye and Pepper. In the industrial yield potsherds again vastly predominated, and the same types are represented, statements which apply with equal validity to our pit finds. In a few pits only, of the Philhower series, were there articles of historic nature. One pit, close to the bluff, held two metal buttons and one rectangular button of glass.[36] One pit, of great importance in the site's story, located on a burial knoll, produced in evident association a bone tube or long bead, a large discoidal shell bead, a fragmentary "pattern stone," engraved with a typical Mohawk pottery rim design, and half a tubular red glass bead with blue interior.[37]

Similarly, as judged from the grave goods accompanying only 10 or 12 of the nearly two hundred flexed burials[38] found by Philhower, but one exception from a prehistoric context is evident. This skeleton of an adult, found on the western cemetery knoll, is said to have had the following accouterments: 4 side-notched jasper projectile points, several triangular chert arrow points, and 2 of similar pattern made from sheet brass, 2 small brass bells and parts of a brass or copper kettle.[39]

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[36]These articles were not seen by the author.

[37]Seen in the Philhower collection.

[38]One extended adult skeleton, without mortuary offerings, was found on the sand plain near the bluff.

[39]A part of this material was seen in the Philhower collection.

In the much-plowed humus layer covering the pits and graves, Philhower occasionally found objects of white man's manufacture, such as kaolin pipe fragments, brass scraps and arrow points, iron knife blades, and a few glass beads. Such traces from the topsoil were also observed by our party on both the Bell and Philhower properties, and by Heye and Pepper in the area explored by them.

The picture of the site, then, prior to our excavations of 1947, was obscure. Reasons existed to suspect the presence either of several superimposed components, namely the Coastal (?), Owasco, Iroquois, and historic Munsee, or of a long more or less continuous occupation extending from the late prehistoric into the early colonial period. Apparently the latest occupancy, and surely its attendant graves, were centered on the eastern portion, and were underlaid even there by ample remains, in the form of pits and flexed burials, of the dominant prehistoric habitation of the site. In view of the most recent work, now to be described, it is obvious that the high sand plain opposite the southern end of Minisink Island was the locus for many generations, probably for centuries, of a shifting continuum of population, with one or perhaps two temporal gaps, early and late (?), respectively.

EXCAVATIONS OF 1947 ON BELL-PHILHOWER SITE

Work was begun on the Philhower portion of the site on July 6 and continued through July 15, during which period 16 pits and one burial were excavated. Because this section had long been under intensive investigation by Philhower, it was necessary for us to shift our activities from point to point and dig many test pits in search of undug spots. Those found occurred both on the sand ridge and on the plain between it and the bluff. Since the entire area now owned by Philhower has been allowed to revert to a wooded condition, a survey for the purpose of accurately relating spatially the scattered features was deemed impracticable.

On July 16, attention was shifted to the more promising still unexplored section of the adjacent Bell farm, lying west of the portion dug by the Museum of the American Indian, and comprising approximately 21,600 square feet or slightly less than half an acre. A lease of ten days was procured from Bell, which was later extended by the purchase of additional digging privileges to constitute a total of 22 working days. This area of the site being cleared, although for some time uncultivated, it was readily possible to survey it, with the result shown on the map, Plate 1.

Test pits made with the shovel and grooved testing rod demonstrated conclusively the absence here, as on the Philhower tract, of any general refuse mantle.

At rare intervals, in both places, a refuse deposit a few inches thick covered a very restricted region, perhaps an original hollow or low place in the site. The topsoil zone, subject to a century and a half of intensive cultivation, was defined with extreme clarity as a dark soil layer, almost uniformly ten inches in depth, overlying the light-colored sand subsoil. It consisted of humus and organically stained sand, probably derived in part from refuse material, including charcoal, and it was productive of occasional artifacts of all occupations, thoroughly commingled, being the sole source of the scanty remains of the historical period found by us.

Partly because of the evident lack of a generally undisturbed surface refuse deposit, but chiefly due to serious time limitations, a small working party, and the prevailing low productivity of the pits, which necessitated the excavation of a large number in order to obtain a sufficient body of data for analysis, it was mutually decided to forego the technique of stripping the entire topsoil from each section,[40] in favor of intensive testing of each 20-foot section with rod and shovel. Pits found in this way were marked by stakes and explored by first removing the overlying plowed topsoil to expose the top and environs (Plates 2, B; 4, B), then excavating by horizontal or vertical cutting with the trowel, or by a combination of both methods (Plates 2, A; 3; 4, A). Artifacts recovered were segregated by pits, by stratigraphic layers in pits, or by location at top, center, or bottom. Great care was exercised to discover intrusive features and all members of the party were repeatedly cautioned to recognize and report for concerted attention and analysis on the spot, any instances of mixed typology.

Pits

Our survey found 100 pits on the Bell-Philhower Site, 84 of which were on the Bell tract. By conservative estimate, a minimum of 500 such features must originally have existed on the site, a fact which probably accounts for the absence of a surface refuse mantle, since, as in comparable sites elsewhere,[41] the bulk of the refuse was doubtless disposed of in abandoned pits.[42] From internal evidence, and this analogy, it appears that the primary purpose of most of these pits was the storage of horticultural

[40]The replacement of this humus would constitute another time-consuming task.

[41]The Castle Creek, Bainbridge, and Clark components, for example. See Ritchie, William A., *An Algonkin-Iroquois Contact Site on Castle Creek, Broome County, New York (Research Records of the Rochester Museum of Arts and Sciences No. 2*, Rochester, 1934); Ritchie, *The Pre-Iroquoian Occupations of New York State*, pp. 61-71.

[42]Any thin, general surface deposit of refuse would early have been thoroughly intermixed by the plow with underlying sand and overlying humus, to produce a dark topsoil layer, such as actually occurred. The erosion of the bluff by the Bena Kill has destroyed not only any traces of a hillside dump which might have been present, but a strip of the site itself, according to Mr. Bell.

products (corn, beans, and perhaps squashes) and wild vegetable foods (nuts and perhaps seeds).[43] The larger structures, often over 5 feet in diameter and 3½ feet in depth, seem in particular to have fulfilled this purpose. Several forms occurred—straight walled, deep bowl shaped, and bell shaped (i.e., flaring near the bottom)—all of which have counterparts on New York sites of the Castle Creek Focus.

Smaller and shallower pits may have been employed for baking or roasting foods, as suggested by the large quantity of fire-broken stones, sometimes present in well-defined layers, either intermingled with or overlying deposits of charcoal and ashes and sometimes associated with masses of mussel shells and broken animal bones.

While refuse bone, charcoal granules, fire-broken stones, stone chippings, and other rejectage occurred in varying quantities in most of the pits, fully 45 per cent were sterile of artifacts or their industrial content was very scanty. In general, this condition was correlated with a light brown, homogeneous sand fill, appearing to consist largely of wash, weakly stained with humus and charcoal. Very dark fill, either uniform or disposed in strata, variously interspersed with lenses or layers of lighter sand, charcoal and ashes, broken stones, etc., usually yielded most abundantly. This seemed to be especially the case in smaller hearth-bearing pits, which may have been cooking pits located in or near lodges.

Large, concentrated masses, up to a bushel or more, of clam shells or broken animal bones, were present in some half-dozen pits (Plates 2; 3, B). Smaller quantities of scattered food-refuse bone, chiefly of deer, were of common occurrence.[44] Chips, spalls,

[43]Pit 67 had a lining of carbonized grass such as occurred in 16 pits on the Castle Creek Site (Ritchie, *An Algonkin-Iroquois Contact Site on Castle Creek*, pp. 10-11), and in 2 on the Bainbridge Site (Ritchie, William A., *Excavations in a Prehistoric Village Site near Bainbridge, New York* [*Bulletin of the Rochester Museum of Arts and Sciences*, April-May, 1939], p. 86), all surely food caches.

[44]Other identifiable species represent the elk, black bear, raccoon, beaver, wolf, porcupine, woodchuck, muskrat, mink, gray squirrel, red fox, wild turkey, and box turtle. Bones and scales of fish (species not identified) were occasionally uncovered.

cores and other rejectage of the chipped-stone industry also had a wide and liberal distribution. Artifacts, except potsherds, were relatively and absolutely rare. Finally, it should be mentioned that abandoned cache pits were sometimes utilized as graves (Plate 5, B). In every enumerated feature of the Bell-Philhower pits there is extremely close correspondence with the observed conditions on the Castle Creek and Bainbridge sites in southeastern New York, a fact which, added to data presently to be adduced, indicates an intimate cultural relationship.

For the sake of brevity and ease of reference the record of the pits found by us on both sections of the site is presented analytically in Table I.

Burials

Our excavations did not encompass any part of the known cemetery areas of the Bell-Philhower Site. However, as in the case of previous workers here, we found occasional random inhumations in the habitation zone, three in all: two occupied refuse pits, one a shallow grave, like those reported by Heye and Pepper.

Burial 1 (Philhower section)

Loosely flexed (?) adult male, supine position. Except for leg bones, the skeleton showed disturbance by an indeterminate agency. Head northeast. No grave goods. Depth to skull 2 feet 6 inches. Covered with brown sand which rested on 2 inches of yellow sand, in turn overlying approximately 10 inches of dark refuse-filled sand containing potsherds of indeterminate cultural provenience and one doubtful Iroquoian sherd.

Burial 1 (Bell section)

Loosely flexed adult male, supine position, legs flexed at right angles to body. Right hand under head, arm bent sharply back from elbow, left hand over pelvis. Face west, head north, body axis north and south. Depth to skull 3 feet 3 inches, to pelvis 4 feet. All bones except skull vault in poor condition. No grave

goods (Plate 5, B). Lay at bottom of deep pit, probably old cache pit, filled with refuse, stratified in upper half. Sherd contents indicate Owasco time period.

Burial 2 (Bell section)

Closely flexed adult female, on left side, face north, head west, body axis east and west. Right hand before face, left hand on chest. All bones in good condition. No grave goods. Occupied shallow grave; depth to skull 11 inches. Grave adjacent to pits 25, 28, and 52 (Plate 4, B).

Anthropometric Observations

Although the data obtainable from two skulls from the Bell section, especially since one (the male) is facially restored and nearly edentulous,[45] are very slight, the major indices are given for comparison with those published by Hrdlička for the skeletons from this site.[46] Except for 4 alien brachycephals, he regards the total series of 23 mensurable skulls (10 male and 13 female) as pertaining to a single ethnic group. With the following exceptions our crania closely conform.

In both, the cephalic index slightly exceeds the average for its respective sex. The vault height of the female, and consequently the height-length and height-breadth indices, are below the average for the series. The nearly edentulous condition of the male partially vitiates the face measurement, hence the facial height and resulting indices fall well below the averages. To a lesser degree this is also true of the female in which the face is intact. In both skulls the orbital index is lower than the mean of the respective series. The nasal index of the female is slightly above the average. Despite these differences it seems very probable that, on metrical and morphological bases, Hrdlička would have included these crania in his Munsee series.

[45]This skull manifests extensive lesions of inactive symmetrical osteoporosis.

[46]Hrdlička, *Physical Anthropology of the Lenapé or Delawares*. The two skulls from the Bell Site are in the Rochester Museum collection. Nos. AP878, 879.

Indices	Male (AP878)	Female (AP879)
Cephalic	75.5	76.7
Height-length	73.9	67.6
Height-breadth	97.8	88.1
Facial, total	80.5	87.4
Facial, upper	47.7	50.7
Orbital	80.4	75.0
Nasal	52.0	55.6

Dog Burials

Heye and Pepper mention the finding of two dog skeletons, one obviously a burial. The second, incomplete and in confused disarray, was associated with deer bones and charcoal in a pit, the whole assemblage being suggestive of food refuse.[47] Philhower also reported the discovery of six dog skeletons, all evidently intentional separate burials, and the recovery of scattered dog remains from several pits.

Near Pit 10 (Bell), our party uncovered what was obviously the inhumed skeleton of a small breed of dog, unfortunately in poor condition since it lay just under the plowline (Plate 5, A).

The possible use of the dog for food was indicated by the following three instances from our observations: Pit 24 produced the disturbed partial skeleton of a large breed of dog commingled with deer bones. The possibility of a disturbed burial could not be eliminated. A mandible from a dog of small breed occurred among bones of deer and bear and mussel shell refuse in the detritus of Pit 34. The molar tooth of a dog was associated with food bones, chiefly of the deer, in Pit 4.[48]

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[47]Heye and Pepper, *Exploration of a Munsee Cemetery*, p. 59.

[48]Remains of a small breed of dog were found in the refuse at the Canandaigua site and as intentional burials at Castle Creek. Ritchie, William A., *A Prehistoric Fortified Village Site at Canandaigua, Ontario County, New York (Research Records of the Rochester Museum of Arts and Sciences No. 3*, Rochester, 1934), p. 49, and *The Pre-Iroquoian Occupations of New York State*, p. 67.

ARTIFACTS

Early Level

An obviously early hiatus in the continuity of occupation of the Bell-Philhower Site, mentioned *ante*, page 164, provides a logical categorization of the artifacts recovered by our excavations. To the earliest demonstrable level apparently pertain a slender inventory of deeply weathered shale and argillite points and blades, probably the fragment of a steatite pot (Plate 6, fig. 18), and possibly the remnants of several pottery vessels. None of these is listed in the trait table of this report, which is restricted, in so far as possible, to the complex representing the later prehistoric and protohistoric periods of occupation, comprising, it is believed, a continuum of essentially the same ethnic and cultural components, with additions on sundry time levels of indubitably alien traits introduced by trade or direct contact with outside groups.

The assemblage of early points and knives found by us is illustrated on Plate 6, figs. 2-17. It is typical of material illustrated by Heye and Pepper[49] and reported also by Philhower under the same conditions as recovered by us; namely, in the undisturbed sand subsoil surrounding pit mouths, in the topsoil, and as rare inclusions in the pit fill. The presence of these artifacts in the subsoil, their deeply weathered condition,[50] and sharply contrasting typology with the almost exclusive triangular form found in the pits, strongly suggest their ultimate derivation in all cases from the subsoil, either by plowing or pit excavation in Indian times.

Nine types of these tools can be differentiated as follows, the number in parenthesis indicating the frequency of occurrence: broad, stemmed points (4), narrow, stemmed points (5), broad, side-notched points (2), narrow, side-notched points (1), lance-

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[49]Heye and Pepper, *Exploration of a Munsee Cemetery*, Plate XXXII, b (top row).

[50]As will later be shown, argillite was also used in the making of broad triangular points, but such implements and rejected chips show very little or no weathering.

olate points (1), lozenge-shaped points (1), isosceles triangular points, with straight base (1), triangular knives (1), and ovate knives (1). There is also a large blank or chopper of deeply weathered argillite.

Cross illustrates similar types from several New Jersey sites, among them the Stobbe Site in Mercer County; Larrison Site, Burlington County; and New Sharon Site, Monmouth County. They appear to form part of a complex which includes, among other traits, the grooved ax, crescentic bannerstone, steatite pot, and grit-tempered pottery vessel, of conoidal form, surface treated with cord, fabric, or net impressions, in rare instances on both exterior and interior, and occasionally with smoothed exterior.[51]

The partially restored vessel from Pit 8 illustrated in Plate 6, fig. 1, and two similar pots found by Philhower, have many features of correspondence with the restored Stobbe pot.[52] Thirty sherds of coarse grit-tempered, fairly smooth-surfaced ware from Pit 48; and 17 thick, coarsely tempered fragments, likewise from a single pot (Pit 61), cord impressed in part on both surfaces, suggest types described by Cross as constituents of this early congeries[53] (Plate 16, figs. 9-10). Three grooved axes mentioned by Heye and Pepper[54] also presumably appertain, and the assemblage would seem to integrate with Cross's Red Valley Focus, the regional equivalent of the Early Focus of the Coastal Aspect (Phase ?) in New York.[55]

Late Level

The trait table of this report presents an inventory, with concise description and frequency of the artifacts found by our

[51]Cross, *Archaeology of New Jersey*, pp. 31-34, 114-17, 130-32.

[52]*Ibid.*, Plate 4, a.

[53]These, like some from the Stobbe Site *(ibid.*, p. 33), appear to belong to the Vinette 1 type, established as the earliest ceramic form in the New York area. Ritchie, *The Pre-Iroquoian Occupations of New York State*, p. 164, and *A Stratified Prehistoric Site at Brewerton, New York (Research Records of the Rochester Museum of Arts and Sciences No. 8*, Rochester, 1946), pp. 16-17.

[54]Heye and Pepper, *Exploration of a Munsee Cemetery*, p. 71.

[55]Cross, *Archaeology of New Jersey*, pp. 210-11; Ritchie, William A., "A Perspective of Northeastern Archaeology," in *American Antiquity*, IV (1938-39), 103-4.

research on the Bell-Philhower Site, and considered on the evidence of associations and typology to belong to the major prehistoric and protohistoric occupation. It includes, where indicated, material from Philhower's unpublished account of the excavations on his section of the site, which was studied by the writer in his collection at Westfield, New Jersey. Since the plates further serve to describe the series, no detailed description has been deemed necessary. Apart from general remarks, therefore, descriptive treatment will be accorded only to those objects of special significance or unusual character.

Chipped-Stone Artifacts

Only two of the 116 projectile points depart from the characteristic triangular pattern of the Owasco culture (Plate 7, figs. 13-38) and these exceptions, a pentagonal-shaped and a broad, side-notched, thin point (Plate 7, fig. 40), are linked traits, recorded on other Owasco stations. The tendency toward asymmetry of the barbs on a number of the triangular points (Plate 7, figs. 30-34, 37, 38) is, however, more characteristic of the Coastal than of the Owasco and may reflect influence from this direction.[56]

The scrapers and drills, too (Plate 7, figs. 43, 44, 47-52), are at home in the known Owasco pattern, but the rarer knives exhibit aberrations, particularly as respects the asymmetric triangular form pictured as fig. 42 of Plate 7. Two of these occurred and, to my knowledge, represent a unique type in this area.[57]

[56]Skinner, Alanson, "The Lenapé Indians of Staten Island," in Wissler, Clark (ed.), *Indians of Greater New York and the Lower Hudson (Anthropological Papers of the American Museum of Natural History*, III, New York, 1909), Plate XII, figs. 7-10, and *Exploration of Aboriginal Sites at Throgs Neck and Clasons Point, New York* (Museum of the American Indian, Heye Foundation, *Contributions*, V, No. 4, New York, 1919), Plate XI, a, c, d.

[57]The materials of the chipped-stone implements are quite varied, as indicated in the trait table. In sharp contrast with the typologically earlier argillite projectile points, the later triangular forms made from this rock, which was probably obtained from exposures along the Delaware River north of Trenton, New Jersey, are either unpatinated or only slightly weathered.

Jasper of several colors—yellow, brown, and red—is amply represented, chiefly

Polished-Stone Artifacts

The relative and absolute rarity of polished stone traits is likewise characteristic of the Owasco culture, as are, in the main, the specific types of artifacts belonging to this category. Prominent exceptions are the two-holed gorget, shown on Plate 9, fig. 11, and the ornate pendant, pictured as fig. 5 of the same plate. The first was found by Philhower in a pit containing a rude, intact pottery vessel of Owasco Platted type, and a curved, eyed, "mat" needle. A very similar specimen is figured by Skinner, presumably from a Coastal culture site on Staten Island,[58] and the type is known from other Coastal as well as Hopewellian and Point Peninsula sites in New York State. The pendant bears a stylized human effigy face in relief on one side, suggestive of the stone effigy heads attributed to the Lenape and more especially of their miniature masks worn, according to Harrington, as health or good

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as discarded chips and spalls. The source of this desirable cryptocrystalline quartz was down river in an area centering in Lehigh and Bucks counties, Pennsylvania.

The preponderant mineral of the finished series and the rejectage of its manufacture is, however, black and white chert or flint. Two varieties of the former are recognizable, one uniformly coal black, the other distinguished by small glassy inclusions or phenocrysts. The first probably belongs to the Lower Devonian group in New York which embraces the Helderberg series, outcropping on the west side of the Hudson Valley and extending south into northeastern Pennsylvania. The second seems identical with the New York Oriskany chert, from a formation in the lower Hudson Valley which extends through eastern Pennsylvania as far as West Virginia. Wray, Charles F., "Varieties and Sources of Flint Found in New York State," in *Pennsylvania Archaeologist*, XVIII(1948), 38-39, 40.

According to John Witthoft of the Pennsylvania Historical Commission, black chert of the first type occurs as boulder material from South Mountain, which runs from Kintnersville, Bucks County, northward to near Harrisburg, being commonest north of the Lehigh River, Pennsylvania.

The translucent white chert, ranging from a milky color through various shades of gray, often in the same piece, is said by Witthoft to exist in boulders in the large streams flowing south from South Mountain. It apparently has the same general distribution as jasper, but it lacks the iron inclusion which confers, in the presence of heat, the coloring to the latter, since our experiments with the chert prove that it does not change color on being heated. Our specimens of both black and white chert obviously represent in many cases a pebble industry.

[58]Skinner, "The Lenapé Indians of Staten Island," in Wissler (ed.), *Indians of Greater New York*, Plate VIII, fig. 1.

luck charms.[59] An analogous object found in a shell heap in upper Manhattan is illustrated by Skinner, who mentions another from New Jersey.[60]

Two fragments of possible gorgets or one-holed pendants from our excavations, and one entire example of the latter found by Heye and Pepper,[61] have Owasco parallels,[62] as does the small engraved triangular pendant (Plate 9, fig. 6) from a pit on the Philhower section, which also produced the remarkable "pattern-stone" (fig. 9 of the same plate) later to be described.

Rough-Stone Artifacts

Apart from a few items, notably the trimmed rectangular net sinkers (Plate 8, figs. 5-8, 10-12, 15), which also appear down river on the Diehl and Overpeck sites,[63] and which seem to be a regional specialization of the late prehistoric and protohistoric periods, and the partly grooved thick pebble sinkers (Plate 8, figs. 9, 16), the rough stone inventory (Plate 8) equates very well with the known Owasco assemblage elsewhere. Stone hoes (Plate 8, figs. 13, 19), however, are here much more numerous.

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[59]Harrington, Mark R., *Religion and Ceremonies of the Lenapé* (Museum of the American Indian, Heye Foundation, *Indian Notes and Monographs*, No. 19, New York, 1921), p. 36. This pendant, Mr. Philhower tells me, was in a pit about 20 feet away from one which produced the carved comb top shown in Plate 9, fig. 7. The latter pit also contained a large number of foot bones of the bear, many still in correct anatomical relation, as shown in a photograph. The paws of this animal had obviously been intentionally buried. Does this fact reveal a ceremonial attitude toward the bear, and are we here confronted with additional evidence of the sort uncovered on the Carpenter Brook Site in Central New York? Ritchie, William A., *Archaeological Evidence for Ceremonialism in the Owasco Culture* (New York State Archeological Association, *Researches and Transactions*, XI, No. 2, Rochester, 1947).

[60]Skinner, Alanson, *Archeological Investigations on Manhattan Island, New York City* (Museum of the American Indian, Heye Foundation, *Indian Notes and Monographs*, II, No. 6, New York, 1920), pp. 178-79.

[61]Heye and Pepper, *Exploration of a Munsee Cemetery*, Plate XXXIII, b.

[62]Ritchie, *The Pre-Iroquoian Occupations of New York State*, Plate 26, figs. 66-68.

[63]Excavated by the Delaware Research Expedition from the University of Michigan. Apparently this type of sinker is a feature of late horizon sites in the Delaware Valley.

Of great interest are the unique "pattern stones" portrayed in Plate 9, figs. 9, 10. They consist of flattened pebbles, engraved with typical Iroquoian pot rim designs and are pit finds by Philhower. Obviously they pertain to the Iroquois influenced period and in one case at least (fig. 10) to the historical level, for this fragment occurred with a large discoidal shell bead of late type and half a red glass tubular bead.

At least two representations of the human face pecked on large stone pebbles are recorded for the Bell-Philhower Site. One, not mentioned in the report of the excavations, is said to have been purchased from Bell by the Museum of the American Indian, Heye Foundation. The second, more rudely fashioned on a rectangular sandstone pebble about 6 inches in height, was taken from a pit by Philhower. The features are depicted in the same manner as shown on the pendant in Plate 9, fig. 5.

An excellent example, delineating only the eyes and the mouth, executed on an oval sandstone pebble, 6¾ inches long, 5¼ inches wide, and 3¾ inches thick, grooved around the periphery, was plowed up by Ludwig on Minisink Island and was seen in his collection. Another of near identity, from the same place, is reproduced by Skinner, who mentions still a third found there.[64]

It seems not improbable that such effigies may have constituted a part of the paraphernalia of the Big House Ceremony, while the smaller "face pendants," previously mentioned, may represent individually owned masks depicting the mask spirit, which were ceremonially buried. As Harrington and Speck suggest, it is doubtless no accident that these stone faces, large and small, have been found in some numbers in the ancient lands of the Lenapé and even occasionally in their more recent abodes.[65]

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[64]Skinner, Alanson, *Two Lenapé Stone Masks from Pennsylvania and New Jersey* (Museum of the American Indian, Heye Foundation, *Indian Notes and Monographs*, New York, 1920), pp. 6-7.

[65]Harrington, *Religion and Ceremonies of the Lenapé*, pp. 32-43; Speck, Frank G., *A Study of the Delaware Indian Big House Ceremony* (Pennsylvania Historical Commission, *Publications*, II, Harrisburg, 1931), p. 43; Skinner, *Two Lenapé Stone Masks*, p. 5.

Bone and Antler Artifacts

The paucity of bone and antler artifacts from the site under discussion accords with the observable Owasco trend toward a progressive decline in the utilization of a bone industry.[66] However, as with the stone equipment, the types are, with few exceptions, standard for the Owasco congeries, as for example, the awl (Plate 7, fig. 4), perforated needles (Plate 7, figs. 10, 11), small cylindrical flaker (Plate 7, fig. 7), box turtle carapace utensils (Plate 7, figs. 3, 8), and deer-phalangeal cone (Plate 7, fig. 5); while the antler pick and bear tibia beaming tool (Plate 7, fig. 2) are diagnostic Castle Creek types.[67]

Only the combs represent a departure, first because combs are a negligible Owasco trait, and secondly because the Bell-Philhower examples, illustrated in Plates 7, fig. 1, and 9, figs. 7, 8, depart widely from known Owasco types, both with respect to form and ornamentation.[68] Parallels for these drilled-pit decorated combs are unknown to me. A similar style of embellishment may be seen on the palpably late pipe bowl, also of undetermined cultural provenience, pictured as fig. 3 of Plate 16, and on a quite comparable specimen from Staten Island portrayed in Skinner's paper.[69] The associations in Pit 72, which included the example found by us (Plate 7, fig. 1), also demonstrate a late horizon, the Iroquoian or protohistoric period (see Table I).

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[66]Compare in this respect the components of the Canandaigua and the Castle Creek foci (Ritchie, *The Pre-Iroquoian Occupations of New York State*, pp. 343-48, and *A Stratified Prehistoric Site at Brewerton, New York*, pp. 24-26).

In this connection the author should like to point out to those exponents of the theory of the derivation of Iroquoian culture in toto from an Owasco background, that the trend observed here with respect to bone, and later concerning the incidence of pipes, militates against such an assumption, since both categories are prominent in the majority of early Iroquois stations.

[67]See illustration in Ritchie, *An Algonkin-Iroquois Contact Site on Castle Creek*, Plate XI, figs. 20, 21, Plate XII, fig. 10.

[68]Ritchie, *The Pre-Iroquoian Occupations of New York State*, Plate 29, figs. 32, 33.

[69]Skinner, "The Lenapé Indians of Staten Island," in *op. cit.*, Plate IX, fig. 3.

Shell Artifacts

The virtual absence of a shell component accords with the Owasco cultural pattern. The large discoidal shell bead found by Philhower in a historical period pit (Plate 9, fig. 4) and the worked sections of a conch columella and whorl from Pit 24, shown on Plate 7, fig. 9, exhaust the list. From the fact that this pit contained Castle Creek Epigonus sherds of the late or transitional period it is obvious that these pieces presage the rich shell industry of the final historical phase, as revealed by Heye and Pepper.[70]

Ceramic Artifacts

Articles manufactured of baked clay comprise the rare pipes and abundant pottery. Again in keeping with the evident trend within the Owasco Aspect, the incidence of pipes on the Bell-Philhower Site is small. Indeed, it has here reached negligible proportions, being represented only by one line-incised obtuse-angle elbow-type specimen found by Philhower (Plate 9, fig. 3), a rectangular stem section, with vertical cord impressions on the sides (Plate 16, fig. 7), a corded-stick decorated bowl fragment and a straight example bearing a faintly incised crisscross pattern (Plates 9, fig. 1; 16, fig. 1). The latter, reminiscent of rare examples from the earlier Canandaigua Focus,[71] is like them, morphologically distinguishable from the probably prototypic true tubular form of the Point Peninsula level[72] in that the bowl cavity is well differentiated, as represented in Plate 9, fig. 1.

Pictured on Plates 9, fig. 2, and 16, fig. 2, is an artistic effigy pipe bowl seemingly depicting a turtle. Conceivably the missing stem bore a representation of the animal's head. Shell traces remaining in the circular punctations adorning the carapace suggest former inlays of this material. It was found in direct association with Owasco, Overpeck Incised, and indeterminate types of potsherds in Pit 9. It does not conform with any Owasco example known to the writer and is suspected to have a down-river origin.

[70]Heye and Pepper, *Exploration of a Munsee Cemetery*, pp. 30-44.
[71]Ritchie, *A Stratified Prehistoric Site at Brewerton, New York*, pp. 12-13.
[72]Ritchie, *The Pre-Iroquoian Occupations of New York State*, Plate 54, fig. 52.

Perhaps also from the Unami country is the still later pipe type represented by the polished, pit- and line-decorated bowl fragment (a union of pieces from two pits, 42 and 80, illustrated on Plate 16, fig. 3), and several round stem sections of similar paste, color, and treatment (for example, fig. 6 of the same plate). A somewhat similar decorative motif occurs on a bowl fragment from Staten Island illustrated by Skinner.[73] The form, as nearly as can be judged, and the paste, but not the decorative features, have affinities with late seventeenth-century Iroquoian types.

In sharp contrast to the paucity of pipes is the abundance and diversity of pottery, which falls into five major categories; namely, types referable to the Owasco Aspect, particularly the Castle Creek Focus thereof, which constitutes the bulk of the series; a transitional or Castle Creek Epigonus ware; Iroquoian types; a new type known as Overpeck Incised,[74] and a considerable number of indeterminate types.

No attempt will be made in this report to describe fully this large collection of pottery. The Owasco series corresponds, almost without remainder, to the key collections for this aspect from New York, which were recently analyzed and described by Richard S. MacNeish and the writer.[75] Consequently the Owasco ceramic types are herein referred to only by name. Since MacNeish's study of Iroquois pottery awaits publication, the same shall apply to this category of the fictile remains. The essential features of rim form, style, and technique of decoration of the Epigonus, Overpeck, and indeterminate pottery are stated in the Trait Table, while the plates (10-20) illustrate all major varieties.

No shell tempering occurred in any sherds, grit and sand being the universal aplastics. Apart from a small percentage of limestone tempering, the Owasco sherds adhered to the customary

[73]Skinner, "The Lenapé Indians of Staten Island," in *op. cit.*, Plate IX, fig. 3.

[74]Named by John Witthoft. Data presented at Ceramic Conference held at the Rochester Museum of Arts and Sciences, October 27-29, 1947.

[75]Ritchie, William A., and MacNeish, Richard S., "The Pre-Iroquoian Pottery of New York State," in *American Antiquity*, XV, No. 2 (1949-50).

tradition of crushed granitic grog, prevailingly medium to medium fine, but ranging from medium coarse to fine in texture.

The tempering of Epigonus ware conforms to the Owasco pattern, while Iroquois sherds have either medium or medium fine granitic or crushed micaceous schist aplastic, the latter resulting in the pleasing effect of a multitude of lustrous muscovite flakes on the surface. Contrary to the usual condition, the Iroquoian ware from this, and indeed neighboring sites, is often friable and shows surface exfoliation (Plates 19, fig. 1; 22). Coarse shale, chert chips, fine gravel, and medium to coarse crushed granitic grit, sometimes abundant, more often sparingly used and irregularly distributed, constitute the tempering media of Overpeck sherds; while coarse to fine grit, sand, and limestone are observable in the indeterminate wares.

A definite correlation in ware and body treatment exists. Owasco ware is dominantly characterized by corded bodies, mostly executed with fine cords, although a small percentage of coarse-cording and probable fabric impressing is present. Smoothed-over cord is next in frequency. Checked stamp surfacing is rare.

The surface of Iroquoian ware is prevailingly smooth, but there are a few examples of smoothed-over cord (Plate 19, fig. 1).

Smoothed-over cord seems to have been the body treatment of the Epigonus ware: fine cord impressions characterize what seem in terms of paste characteristics to be Overpeck body sherds; and fine cording, coarse brushing, or smoothing were applied to the exterior body surface of pots of the indeterminate class.

Inasmuch as approximately 75 per cent of the identifiable sherds and pots from the Bell-Philhower Site belong to the Owasco culture, it becomes necessary to compare this site with the main stations of this aspect elsewhere in order, if possible, to determine its relative temporal position in the sequence as established by the writer and recently confirmed by the more objective methodology of ceramic typology.

Figure 1 presents the results of this analytical study, in which certain significant trends and aberrations are evident. Conspicu-

ously absent are all of the diagnostic early Owasco types, although there were found a total of 37 sherds of indeterminate types, reminiscent of the cord-on-cord and plain forms. The Owasco Corded Oblique type, having its highest incidence in the middle period, has undergone a progressive decline but persists as a minority type at the Bell-Philhower Site. The Owasco Herringbone type, too, has suffered an eclipse in popularity with the passage of time[76] and appears on this station with a somewhat lower frequency than might have been anticipated by the trend. Conversely, the Owasco Platted and Owasco Corded Horizontal forms, ascendant from the earliest known times, here attain to their apogee in what we may regard as final Owasco. Another type, the Owasco Corded Collar, diagnostic of the later or Castle Creek developmental stage, constitutes another of the dominant types at the Bell-Philhower Site, as might be expected, for this also is a final Owasco form.

Castle Creek Punctate and Castle Creek Beaded have a brief flare on the Castle Creek horizon and the latter may be a local development at the Castle Creek Site. Their continuation as minor types is helpful in our historical reconstruction.

The Bainbridge component, while linked to the series with numerous bonds, is nevertheless aberrant in several respects, one of which comprises its three diagnostic pottery types, particularly the Collared Incised form which, however, is foreshadowed at Castle Creek. The 1 per cent of this type recognized at the Bell-Philhower Site is perhaps too small a figure, since it does not include a dozen or more neck sherds exhibiting the distinguishing incised decoration. Lacking the attached rim no positive identification is possible, which may account for the surprising total absence of the Castle Creek Incised Neck type.

The Bell-Philhower ceramic complex can obviously be placed in the late Castle Creek horizon, and the typological trends would

[76]Whether temporal or spatial factors or a combination of both are reflected in the distribution depicted by this graph is still uncertain despite much work. On the basis of the total data from smaller sites as well, widely distributed over the known Owasco range, the writer strongly inclines to the temporal factor. See Ritchie, *The Pre-Iroquoian Occupations of New York State*, Plate 6.

seem to place it as a successor to the manifestation at the Castle Creek component and probably on, or near, the Bainbridge time level, an assignment which derives support from the sum of the artifactual evidence.

However, the obvious fact of depth perspective, as evidenced by the pit data, must be kept in mind; hence to regard even the Owasco component at the site as representing a single time unit may be a simplistic fallacy. Quite conceivably the apparent contemporaneity of the types shown on the graph for this site is deceptive. To clarify this point we must now consider the distribution of the whole ceramic constituent, its typological interrelations, and associations in the pits with nonpottery traits.

PIT ANALYSIS

Analysis of the total contents of the pits reveals the correlation of the predominant, equilateral, triangular point type and the specific "trimmed" net sinker with every ceramic category and nearly every type. Furthermore, the repeated associations of all the ceramic types in pits having a homogeneous or nearly uniform fill, suggests their coevality. However, discounting pits which could not be typed for lack of sufficient cultural evidence,[77] and a smaller number which produced only indeterminate pottery forms,[78] there remains an impressive series attributable solely to the Owasco time period. Of these, eight produced sherds seemingly more characteristic of the Canandaigua Focus, hence possibly representative of an earlier Owasco occupation at the site.[79] It must, however, be emphasized that the chief basis for this statement consists in the presence of a small quantity of cord-on-cord and plain sherds, whose small size and number and simplicity may readily result in their confusion with some still unrecognized non-Owasco types, probably derived from regions to the south in New Jersey and eastern Pennsylvania, and closely akin to certain forms of our indeterminate series.

Pottery types characteristic of or exclusive to the Castle Creek horizon occurred without attendant wares in 21 pits,[80] while in five others Owasco sherds too small to type were found.[81]

These facts suggest a period of occupation of the site solely confined to the Owasco time level and mainly if not exclusively of Castle Creek provenance. Diagnostic, to my mind, of the terminal phase of Owasco culture is the Castle Creek Epigonus ware, described in Table II and illustrated on Plate 13. This ware,

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[77]Pits 10, 18, 40, 55, 75, 78, 82; 13 Philhower, 15 Philhower. Pits not designated as Philhower, were in the Bell section.

[78]Pits 8, 58, 61, 62, 66; 1 Philhower.

[79]Pits 12, 15, 16, 27, 35, 54, 57, 79; 9 Philhower. In all cases, here and following, the types and frequencies may be determined by reference to Table I.

[80]Pits 6, 7, 17, 29, 32, 33, 39, 42, 45, 46, 47, 48, 49, 53, 56, 69, 70, 79, 80; 7 Philhower, 8 Philhower.

[81]Pits 21, 36, 59, 63; 11 Philhower.

exclusive in two pits,[82] and attendant in several others,[83] is believed to represent the product of a very late stage of acculturation of Castle Creek potters under Iroquois traditions which were shortly to dominate them completely.

As previously stated, intimate associations of pottery of all kinds were found by us repeatedly in pits with homogeneous fill, as follows: Owasco+Overpeck,[84] Owasco+Overpeck+Indeterminate,[85] Owasco+Overpeck+Indeterminate+Iroquois,[86] Owasco+Overpeck+Castle Creek Epigonus,[87] Owasco+Castle Creek Epigonus,[88] Owasco+Castle Creek Epigonus+Indeterminate,[89] Owasco+Indeterminate,[90] Owasco+Indeterminate+Iroquois,[91] Owasco+Indeterminate+Iroquois+Castle Creek Epigonus,[92] Iroquois only,[93] Iroquois+Indeterminate,[94] Iroquois+Indeterminate+Castle Creek Epigonus,[95] and Overpeck Incised only.[96]

Now, it is highly unlikely that this complicated situation reflects a wholly accurate biography of the site. The obvious duration and intensity of the occupation plus the evidence from the weathered argillites already cited, creates the high probability of some degree of fortuitous intermixture of culturally disparate materials at all periods. Wash and perhaps intentional filling would introduce into the pits both surface and subsurface relics of older habitation. To be sure, in many instances these prior remains might pertain to the same level of occupation, hence would not

[82]Pits 24; 3 Philhower.
[83]Pits 14, 26, 30, 51, 67; 2 Philhower.
[84]Pits 5, 9, 83.
[85]Pits 4, 11, 19, 23, 52.
[86]Pits 1, 37, 77; 4 Philhower.
[87]Pit 26.
[88]Pits 14, 51.
[89]Pits 30, 43.
[90]Pits 2, 13, 25, 35, 38, 41, 44, 60, 64, 71, 74, 81; 6 Philhower, 10 Philhower, 12 Philhower.
[91]Pits 22, 31.
[92]Pit 2 Philhower.
[93]Pits 20, 65, 72, 84.
[94]Pits 3; 14 Philhower.
[95]Pit 67.
[96]Pits 68, 73.

destroy the cultural consistency of the product of our excavations. Considering the evidence as a whole, however, obtained from some 44 pits of this mixed character, it is equally improbable that we are dealing consistently with situations of this kind. Moreover, a number of pits produced virtually unassailable evidence of the contemporaneity of the several ware styles and types found on this site. For example, Pit 52, a bell-shaped feature opening under 9 inches of topsoil, was filled to within a few inches of the bottom with a homogeneous black sand. At the fundus a mixed ash and refuse layer overlay the burned red subsoil. Throughout the fill occurred, in direct and intimate association, 21 Owasco sherds, from a minimum of 6 pots (see Table I for types), 11 sherds of Overpeck Incised, and 2 sherds of indeterminate types. Sherds pertaining to at least two of these vessels occurred from top to bottom, indicating the brief use of the pit as a refuse repository, a condition often observed by the writer on New York Castle Creek sites. At the very top of the pit, just beneath the plowline, lay a single early Iroquoian potsherd (Chance Incised), evidently an intrusion.

Pit 4, Philhower Site, 5 feet in depth, presents a still clearer case in point (Plate 3, B). Under a foot of topsoil there were 8 to 12 inches of black refuse overlying a compact layer of clam shells, 6 to 12 inches in thickness. This covered a 10-inch deposit of stained sand, looking like wash, which in turn rested upon 6 to 8 inches of black refuse, superimposed successively on a partial layer of fire-broken stones, a 2-inch lens of stained sand, and finally a basal deposit of 11 inches of black refuse. The fact should be stressed that the intact shell and sand layers thoroughly and effectively sealed off the upper from the lower deposits of black refuse. Disregarding, as before, the nonceramic traits (whose inclusion would, incidentally, strengthen the case for contemporaneity), the following distribution occurred: upper refuse zone: 1 sherd Castle Creek Beaded, 2 sherds Iroquois (Chance Incised), 2 sherds indeterminate (red ware, straight sided, incised herringbone design). Middle or shell and sand zone: 1 sherd Owasco Corded Collar, 3 sherds Owasco Platted, 1 sherd Owasco

Herringbone, 4 Owasco sherds too small to type. Basal black refuse stratum: 1 sherd Owasco Corded Collar, 3 sherds Castle Creek Beaded, 1 Owasco sherd too small to type, 1 sherd Iroquois (Chance Incised), 1 sherd Overpeck Incised, 1 sherd indeterminate (collared with right-angle crisscross incised decoration).

It must be noted that the association at both top and bottom includes late Castle Creek types and an early Mohawk type,[97] together with several indeterminate types. Sophism is a poor substitute for factual evidence of this kind.

Moreover, we need not rely on the ample evidence from the Bell-Philhower Site to prove our point. A similar association occurred at the stratified prehistoric Overpeck Site at Kintnersville, Bucks County, Pennsylvania, attributed by its excavators, Messrs. Witthoft and MacNeish, to the late prehistoric Lenapé occupation of the Delaware Valley.[98] Midden 1, the upper horizon, produced Iroquois, transitional, Castle Creek, and Castle Creek-like sherds, all with thickened applied rim strips, in the same level and probably of the same age, together with Overpeck Incised, Overpeck Incised sherds with Iroquois designs, and indeterminate sherds, apparently derived from southern styles, but which had become a local tradition.

Midden 2, separated from the above by 4 to 6 inches of sterile silt, yielded Owascoid sherds derived from pots with no rim thickening and with everted lips, no Iroquoian remains, and a predominance of the Overpeck Incised type with local design motifs.[99]

Evidence from culturally interlocking pits at the Bell-Philhower Site provided additional support for pit and ceramic type synchronism. Since parts of the same pot (as proved by the fact of their fitting together) were recovered from different pits it is probable that these pits coexisted and that their contents, by and

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[97]According to Richard S. MacNeish, as derived from his intensive study of Mohawk pottery in 1947.

[98]John Witthoft, communication of January 30, 1948.

[99]John Witthoft, data presented at the Ceramic Conference at the Rochester Museum of Arts and Sciences, October 27, 1947, and by correspondence of February 19, 1948.

large, are approximately coeval. Following is a list of such occurrences and the character of their ceramic contents: Pits 14 and 49 (Owasco), Pits 24-26-30 (Owasco, Castle Creek Epigonus, Overpeck Incised, indeterminate), Pits 41-35-52 (Owasco, Overpeck Incised, indeterminate), Pits 42-80 (Owasco), Pits 70-74 (Owasco), Pits 2 Philhower-4 Philhower (Owasco, Iroquois, Overpeck Incised, indeterminate).

On the other hand, the fact of superposition established with equal clarity the late introduction of Iroquoian types into the ceramic complex. For example, Pit 50 was a compound feature consisting of a small black intrusive pit sunk into the center of a much larger pit having light-colored fill which produced intermingled Owasco and Overpeck Incised sherds. The secondary pit bore at its fundus many large sherds of an Oneida form of pot (Plate 20, fig. 3).

In well-stratified Pit 60, two Iroquois sherds occurred with many late-type Owasco sherds in the homogeneous dark 13-inch upper level. Twenty-two inches deeper, under a sterile deposit of wash (?), a stratum of fire-broken stones was found, among which lay only Owasco sherds, some of earlier types, while in the basal thick black refuse zone beneath the stones there were present sherds derived from a coarse-tempered pot, having a smoothed-over corded surface embellished with parallel corded-stick imprints.

HISTORICAL RECONSTRUCTION AND CONCLUSIONS

In assessing the total evidence gleaned from our excavations at the Bell-Philhower Site it seems possible to conclude that the Castle Creek culture represents the primary and dominant later occupation. To this base was subsequently added ceramic increments, at first probably from groups down river and in northeastern New Jersey, comprising the majority of the indeterminate styles (some of which were familiar to MacNeish and Witthoft from the Overpeck Site) and the Overpeck Incised, definitely diffused from the Bucks County area on the Castle Creek time level. Some of these may turn out to be of Unami provenience.[100] Soon after, it would appear, and still in late prehistoric times, Mohawk and/or Oneida-Onondaga influences were felt from the north. Contacts with this new tradition seem to have eventuated in the style which the writer has called Castle Creek Epigonus, a decadent Castle Creek ware, found elsewhere in the area and in Coastal New York as well, where it has been termed sub-Iroquois ware by Skinner.[1] This Epigonus ware would seem to define the zone of early Iroquois influence and everywhere it was soon supplemented by frankly Iroquoian types. At the Bell-Philhower Site, Chance Incised, an early Mohawk form (Plate 18), vastly

[100] A variant of the Overpeck Incised and a type almost identical with the indeterminate form illustrated on Plate 16, figs. 15, 16, 20, and 21, occur on the Wilkins Site on northwestern Long Island, attributed by Smith to the Bowmans Brook Focus, East River Aspect, Coastal Phase, Woodland Pattern, and temporally equated with the Canandaigua Focus, Owasco Aspect. Smith, Carlyle S., *A Resumé of the Archeology of Coastal New York* (Archeological Society of New Jersey, *News Letter, No. 16*, July, 1947), p. 17, and study of the specimens generously donated by Dr. Smith in August, 1947.

Samples of our Overpeck Incised sherds sent to John Witthoft for comparative study with his series from the key site were returned with the statement that they appeared to him identical in paste, temper, and technique and design of ornamentation (letter of March 11, 1948). This confirms my suspicion that trade pots from down river in the Unami country reached the Bell-Philhower Site in pre-Iroquoian times.

[1] Skinner, *Exploration of Aboriginal Sites at Throgs Neck and Clasons Point*, pp. 106-11, and *Archeological Investigations on Manhattan Island, New York City*, pp. 210-11.

predominates in this category, while Hudson Valley Incised (Plate 20, fig. 4), Hudson Valley Crescent Incised, and Kingston Incised (Plate 20, fig. 1), all late prehistoric and early historic period types, probably referable to the Mohawk, occur as minority types.[2] Still untyped Oneida-Onondaga forms (Plate 20, figs. 2, 3) are also present, sometimes associated with Mohawk varieties in the same pit.[3]

It is significant to note that the ceramic changes were not attended by any observable modifications in the stone and bone constituents of the culture, which apparently continued to retain their Owasco characteristics until replacement by European goods.

That the Iroquois ceramic tradition overlapped with the Owasco as part of a continuum of occupation by the same group, which we believe to have been Munsee, seems thus firmly established. The mechanism of this process of acculturation is still obscure, however. We learn of "Seneca" forays against the Minisink town in 1663,[4] and of Mohawk and later "Seneca" demands for tribute in the latter part of the seventeenth century,[5] while recent evidence suggests that the Delawares had been subdued by the Iroquois well before 1712.[6] There is the strong probability that the Andaste of the Upper Susquehanna Valley in Pennsylvania made war upon the Delaware tribes before 1600.[7] While the earlier cultural aspects of the Andaste are imperfectly known, both Witthoft[8] and the writer[9] recognize Mohawk relationships in Andaste-Susquehannock ceramics, and the latter were claimed by the Mohawks in 1675 as "their own offspring."[10] It may,

[2]Identification of Iroquoian types based on MacNeish's data presented at the Ceramic Conference held at the Rochester Museum of Arts and Sciences, October 20, 1947.

[3]See Plate 20, figs. 1, 2, 4.

[4]Ruttenber, *History of the Indian Tribes of Hudson's River*, p. 68.

[5]*Ibid.*, p. 69.

[6]Weslager, Clinton A., *The Delaware Indians as Women (Journal of the Washington Academy of Sciences*, XXXIV, No. 12, Washington, 1944), p. 383.

[7]Hanna, Charles A., *The Wilderness Trail* (New York, 1911), p. 27.

[8]John J. Witthoft, data presented at the Ceramic Conference at Rochester Museum of Arts and Sciences, October 27, 1947.

[9]Notes based on personal excavations in Broome County, New York.

[10]Hanna, *The Wilderness Trail*, p. 34.

therefore, be that the early cultural influence recognized as Mohawk on the Bell-Philhower Site actually infiltrated through Andaste contacts.[11] It is also quite possible that hostile contacts between the Mohawk-Oneida and the Munsee occurred before 1600. These may have resulted in the acquisition of Mohawk-Oneida women who introduced their traditional pottery styles,[12] or through amiable relations with the Esopus tribes of the Kingston area which maintained cordial connections with the Munsee at least until 1663,[13] and whose ceramic pattern in early historical times was largely Mohawk.[14]

The flaky texture of the Iroquoian wares from the Bell-Philhower Site is quite at variance with similar pottery types found in New York state and elsewhere and suggests locally manufactured copies of Mohawk-Oneida pottery rather than trade pots. In this connection one is tempted to refer to the unusual "pattern stones" found by Philhower (see Plate 9, figs. 9, 10) as possible mnemonic devices for the recording of alien decorative styles for subsequent reproduction. The evidence at our command would, then, indicate

[11]The archaeological evidence does not suggest that the Seneca, often referred to in the historical annals as the principal molesters of the Delaware peace, ever exerted any cultural influence in the Munsee area. The confusion probably arises from the fact that the term "Sennecas" was indiscriminately applied by the early Dutch to all Iroquois tribes west of the Mohawk. *Ibid.*, p. 33. Fenton states that the name " 'Seneca' derives from the Mahican term for the Oneida, and the Dutch used the term as early as 1616. The anonymous Dutch journalist celebrated the New Year of 1635 at the castle of the Oneidas or 'Sinnekins.' " Fenton, William N., "Problems Arising from the Historic Northeastern Position of the Iroquois," in *Essays in Historical Anthropology of North America (Smithsonian Miscellaneous Collections*, C, Washington, 1940), p. 225. On the basis of historical and archaeological evidence we may conclude that the Oneida and not the western Seneca were the "Sinneka" of Munsee history.

[12]Adherence to the recognized anthropological principle of selective diffusion based upon the character of the contact would tend to sustain the hypothesis, since contacts on a wider scale might have led to the adoption of other traits as well, provided these proved compatible and congenial to the borrowing culture.

[13]The Esopus are said to have been kinsmen of the Munsee, which may provide the explanation. Hodge (ed.), *Handbook of American Indians North of Mexico*, pt. 1, p. 437. Compare Ruttenber, *History of the Indian Tribes of Hudson's River*, pp. 93-96.

[14]As judged from the Kingston, New York, Site, excavated by James Shafer and Edmund S. Carpenter in 1945-46.

that about A. D. 1600, or before European contact in this region, the ceramic constituent of Munsee culture was undergoing replacement from Owasco to Iroquoian traditions. This statement is supported not alone by the Bell-Philhower testimony, but also by our discoveries on neighboring Minisink Island, and on the Haskins and Davenport sites in the general vicinity.

On a long sand ridge at the head of Minisink Island,[15] we located within the space of a few hundred feet, 4 pits and one burial. Pit 1 was deep and dark, but sterile of cultural contents. Pit 2, oval in outline, 4 feet by 3 feet 6 inches, depth 4 feet, was filled for the first 18 inches with a solid mass of clam shells, among which were interspersed numerous sherds of two Iroquoian pots (one represented by body sherds only). The partly restored rim, shown on Plate 22, proved to be of Kingston Incised type, which appears on the early historical level in New York. The sole additional contents were fragments of a turtle carapace. Below the shell zone the light-colored fill was completely sterile.

Pit 3, oval, 3 feet 2 inches by 3 feet 8 inches, depth 4 feet, was still less productive. The top 4 to 5 inches beneath the plowline consisted of a similar shell layer, with a few intermixed deer-bone fragments and 6 Iroquoian rim sherds too small to type. Below, in the sterile light-sand fill, two large conical natural stones lay side by side, apices uppermost. Pit 4, circular, diameter 2 feet 8 inches, depth 2 feet 11 inches, was stratified. A 2-inch layer of *Unio* shells appeared at the top, a similar 6-inch layer near the bottom. Broken deer bones occurred in both, forming a definite lens in the lower layer. Immediately beneath both lay a stratum of fire-broken stones. Similar "roasting pits" were found on the Bell-Philhower Site. The top shell layer produced many friable sherds of an Iroquoian pot of Hudson Valley Crescent Incised type (Plate 21, figs. 2, 3), found as a minority ware on early Mohawk sites in New York but most characteristic of the second or early historical period.[16]

[15]No explorations were possible at the foot, directly opposite the Bell-Philhower Site, due to the presence of standing crops.

[16]Richard S. MacNeish, notes made at the Ceramic Conference held at the Rochester Museum of Arts and Sciences, October 28, 1947.

Burial 1 lay on the northern edge of Pit 3 and consisted of the much decayed remains of an adult male, without grave goods, interred at a depth of 15 inches, in a closely flexed position on the left side, heading northwest and facing southwest.

The Haskins Site, situated approximately one-fourth mile south of the Bell-Philhower Site on a faint rise along the Delaware, yielded several sterile pits and one which produced a few artifacts of the late prehistoric period. This circular structure, 4 feet 5 inches in diameter and 3 feet 3 inches in depth, had a 6-inch compact shell layer sandwiched between two dark-brown sand strata, both sterile. Among the shells were deer bones, fish bones and scales, charcoal particles, a smooth pipestem round in section, a rude tabular whetstone, and a single sherd of Iroquoian style pottery, collarless but with deep incised rim bordered basally with oval punctations.

The previously mentioned Davenport Site situated on the Delaware flood plain opposite Milford, Pennsylvania, on the New Jersey side of the river, had been greatly flood torn in past years and was unavailable to us without the purchase of a lease. We were permitted to test the site for one day, however, during which time one pit and two burials were located.

The pit, 5 feet 2 inches in diameter and 4 feet in depth, contained a fill of dark sand with much scattered shell, bone refuse, charcoal, and heat-broken stones. A carbonized bark lining covered much of the bottom. Scattered about in the fill were the following artifacts: 11 notched pebble net sinkers, 5 trimmed rectangular net sinkers, an anvil stone, a tabular whetstone, a plano-convex adze, 3 large rejected triangular points, and fragments of 2 Iroquois pots, both of Kingston Incised type (Plate 21, fig. 1).

Burial 1, a much-disturbed large adult male skeleton, occurred in a pit with scattered sherds of Iroquoian pottery (Chance Incised [?], and Hudson Valley Incised [?] types), and one narrow concave-base triangular arrow point.

Burial 2, that of a child, 4 or 5 years of age, in very poor condition, was found at a depth of 15 inches. There were no accompanying artifacts.

From the surface of this site Dr. Vernon Leslie recovered after the flood of 1936 a considerable number of artifacts, for the most part corresponding with types from the Bell-Philhower Site. These include a discoidal muller, 5 thick-polled celts, 7 small stone chisels, a cylindrical pestle bearing an effigy head (snake?) at one end, one sinew stone, many net sinkers made from flat pebbles or chipped (trimmed) into rectangular shape, 62 broad triangular arrow points, 10 notched and stemmed points, 2 each of leaf-shaped and lozenge-shaped points, 4 end scrapers, 2 pipestem fragments of smooth round type, 3 pipe bowl fragments ornamented with pointillé linear designs, several sherds of Hudson Valley Incised type, plus fragments of Onondaga-Oneida, Susquehannock, and other untyped Iroquoian wares, and Castle Creek Epigonus, Owasco Herringbone, and Owasco Platted types of the Castle Creek category. Among this material occurred one broad triangular arrow point cut from a piece of European sheet brass.[17] This point may portray in the region the initial inkling of trade contacts, probably with the Dutch settlement on the Hudson at Kingston, New York. The glass bead found with a fragmentary "pattern-stone" by Philhower on his site would appear to be of comparable age, and the author would place the time close to A. D. 1625.

Unless we have misinterpreted our data, the succeeding quarter century or so is poorly represented, if at all, on the Bell-Philhower Site. Iroquois raids on the area and perhaps the inroad of epidemic disease attendant upon European connections may, soon after 1625, have resulted in the decentralization of the Munsee band resident at the Bell-Philhower Site.[18] If such were indeed the case, small hamlets of this period should exist somewhere in the Delaware Valley, probably down river. They should be recognizable by trade goods in some abundance, but persons familiar with the territory south to the Water Gap in their search

[17]Leslie, "An Archaeological Reconnaissance of Upper Delaware Valley Sites," in *Pennsylvania Archaeologist*, XVI, 102-3, and personal examination of the collection.

[18]A severe smallpox epidemic is mentioned by Ruttenber, *History of the Indian Tribes of Hudson's River*, p. 181, and other writers.

for Indian sites have no knowledge of such stations. Historical period village and cemetery sites on the Neversink above Port Jervis and on the Delaware just above the Water Gap apparently cannot qualify because they seem coeval with the final historical occupation on the Bell-Philhower Site.[19]

It is, therefore, not improbable that the suggested temporal hiatus on the Bell-Philhower Site is more apparent than real; that the full historical period was ushered in quite rapidly after 1625 and its vestiges, apart from the burial goods found by previous investigators on the Bell section of the site, are to be seen in the widely scattered, but nowhere concentrated or abundant, trade objects from the much-plowed topsoil zone covering the entire site (Plate 7, figs. 6, 12). Strongly supporting this assumption is the fact that, at least according to the record, no pits excavated by the Museum of the American Indian, Heye Foundation, produced historic grave goods. From this we may infer that the practice of digging storage pits or of utilizing empty ones as refuse receptacles having been abandoned, the habitation debris of the last half century or so was scattered about upon the surface, to be subsequently intermingled by agricultural processes with older cultural vestiges in the humus zone.

Although leaving something to be desired, the evidence as a whole would seem sufficient to establish for the Bell-Philhower Site a continuum of occupation from the late prehistoric Castle Creek to the full historic period. In the process of transition the Castle Creek complex underwent successive changes, mainly in ceramic content. At first new elements were introduced, perhaps from Unami tribes to the south and east.[20] In historic times the Shawnee are known to have visited the Minisink village.[21] Did they earlier contribute to the alien pottery remains discernible as indeterminate wares in the dominate Castle Creek complex?

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[19]Heye and Pepper, *Exploration of a Munsee Cemetery*, pp. 12-14.

[20]The northern New Jersey tribes of the Unami included, according to Ruttenber, the Navisinks, Raritans, Hackinsacks, Aquackanonks, Tappans, and Haverstraws. Ruttenber, *History of the Indian Tribes of Hudson's River*, pp. 89-93.

[21]*Ibid.*, pp. 180-82.

Still later the impact of Iroquoian traditions was clearly felt. Were they imparted by direct contact with Mohawk and Oneida groups, or indirectly through more northern Munsee bands, such as the Esopus? It is still quite impossible to define to general satisfaction the relationship of late Castle Creek to Iroquoian culture. Some of the sites which will elucidate the complex problems involved presumably exist in the Broome-Tioga-Chemung county area of southern New York and perhaps farther north and east, in the Schoharie Valley. To derive the Iroquoian types locally, appears in the face of the data to be imposing too great a burden on the theory of convergence. Since Onondaga-Oneida, the most classic of Iroquoian forms, as well as Mohawk types, appear, we are almost surely dealing here with a late northern tradition, at least a part of which developed in lower Ontario.

Basically, then, Munsee culture as it first appeared on the Bell-Philhower Site, is identifiable with the complex elsewhere described herein as the Castle Creek Focus of the Owasco Aspect, and there can be little doubt that it represents an importation from up river in New York state. In its New Jersey milieu it underwent progressive changes as the result of acculturation through contacts with neighboring groups, chief of which was probably the Unami with whom the Munsee confederated and for whom they served as a buffer state against the Iroquois. The Unami may have had a basically Early Coastal culture, the latter derived, as I have elsewhere endeavored to show, from an old Laurentian substratum,[22] and were thus probably the nucleus and true "grandfathers" of the Lenapé Nation.[23]

Legitimately we may inquire whether the Canandaigua predecessors of the Castle Creek people may be regarded as proto-Munsee. It would seem that in this case we were concerned with a well-defined and circumscribed cultural entity of the Late Woodland horizon, namely the Owasco, which was being internally developed by an essentially homogeneous Sylvid somatic

[22]Ritchie, *The Pre-Iroquoian Occupations of New York State*, p. 104.

[23]Speck, Frank G., "The Delaware Indians as Women," in *The Pennsylvania Magazine of History and Biography*, LXX(1946), 379, 381, 383.

type.[24] The recognition of the final stage of this development as Munsee seems to me to fulfill a logical prediction from the archaeological evidence.[25] It remains now to elucidate the earlier formative aspects of development on the pre-Canandaigua level, and a hint of that process seems already apparent in the successive stages of the Point Peninsula culture which have recently been more clearly defined, both in central New York state[26] and in southern Ontario, Canada.[27]

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[24]Ritchie, *The Pre-Iroquoian Occupations of New York State*, pp. 74, 100-1.

[25]*Ibid.*, pp. 56-57.

[26]A comparative analysis by Richard S. MacNeish and the writer in 1947, of the Point Peninsula pottery series from the Vinette and Jack's Reef components in central New York, excavated by the Rochester Museum of Arts and Sciences, indicates some developmental trend in Point Peninsula ceramics in the direction of certain early Owasco pottery types. *Ibid.*, p. 52; Ritchie and MacNeish, "The Pre-Iroquoian Pottery of New York State," in *American Antiquity*, XV, No. 2 (1949).

[27]Excavations by the author in 1948 on East Sugar Island, Rice Lake, brought to light early Owasco pottery types in the upper levels of a stratified midden, which produced a developmental sequence of Point Peninsula ceramic typology akin to that established in central New York. The association of the Owasco sherds here suggests an earlier horizon than that previously known in New York. Ritchie, William A., *An Archaeological Survey of the Trent Waterway in Ontario, Canada and its Significance for New York State Prehistory (Research Records of the Rochester Museum of Arts and Sciences, No. 9*, Rochester, 1949), pp. 20-24.

TABLES

TABLE I. PIT ANALYSIS, BELL

No.	Form	Dimensions	Depth	Character	Chipped stone
1	oval	81″x?	58″	Under topsoil lay shallow lens of clam shells. At 29″ second layer of shells, 6″ deep, occurred. Dark sand fill with charcoal, fire-broken stones, 2 elk bones, 58 deer bones, chert chips.	1 proj. point fragment (unweathered argillite) *Chips* 8 white chert 6 black chert 3 jasper (red and yellow) 1 weathered argillite 1 shale
2	circular	46″	41″	Homogeneous stained sand contained 20 small Unio shells, charcoal fragments, fire-broken stones, bits of calcined bone, deer bone fragments and one charred antler tine, flakes and spalls.	3 equilateral triang. proj. points, straight base (2 black chert and 1 unweathered argillite) (concave base) *Chips* 2 white chert 2 black chert 1 yellow jasper
3	oval	52″x43″	36″	Stained brown homogeneous sand with 1 clam shell, 10 deer bones, 1 chip.	2 equilateral, concave-base triang. points (white chert) *Chips* 1 white chert
4	oval	72″x43″	49″	Upper fill very black sand, shell layer 5-8″ thick at 18″. Below shell, sand was lighter than above. Very dark layer at pit bottom. 2 narrow-stemmed and 1 narrow straight-base triang. point of weathered argillite in topsoil, 1 large O. Platted rim sherd in upper fill, O. and Overpeck sherds side by side in fill below shell layer. Dog molar with deer bones. Chips, etc. Burial No. 1 at bottom, below black layer.	2 narrow stemmed proj. points (much weathered argillite) 1 isosceles, straight-base triang. point (weathered argillite) 2 equilateral, concave-base triang. points (1 black, 1 white chert) *Chips* 4 black chert 5 white chert 6 jasper (red and yellow) 1 red slate 2 argillite (unweathered)
5	circular	49″	35″	Homogeneous brown sand fill. Deer bone fragments, chips.	2 equilateral, concave-base triangular points (1 white chert, 1 black chert) *Chips* 1 black chert 7 white chert

[1] O. = Owasco

BELL-PHILHOWER SITE

Section

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
	2 anvil stones 1 bi-pitted stone 1 trimmed net sinker	*Rims* 2 O.[1] Platted 1 O. Corded Horiz. 1 O. Corded Oblique 1 Chance Incised 1 Iroq. (too small to type) 3 Overpeck Incised 1 indeterminate (corded with notched lip) *Body Sherds* 6 smoothed-over cord 21 corded 8 smooth		Owasco+ Overpeck+ indeterminate+ early Iroq.
	2 combined hammer and anvil stones 3 trimmed net sinkers	*Rims* 2 Canandaigua Plain (?) 1 corded indeterminate *Body sherds* 4 corded 5 smoothed-over cord 3 checked stamp 1 push and pull 2 smooth 1 square dentate stamp 3 corded-stick impressed		Owasco (?)+ indeterminate
		Rims 1 Iroq. (untyped) 1 indeterminate (corded) *Body Sherds* 4 corded 4 smoothed-over cord 1 smooth 1 corded-stick marked		Single period pit Iroquois (?)+ indeterminate (?)
	1 anvil stone	*Rims* 4 O. Corded Collar 1 O. Platted 3 O. (too small to type) 1 Overpeck Incised 1 indeterminate (smooth, collared) *Body sherds* 8 corded 9 smoothed-over cord 9 smooth	1 antler point (awl?)	Appears to be one period pit. Owasco+ Overpeck+ indeterminate
		Rims 1 O. Corded Horiz. 1 Overpeck Incised *Body sherds* 10 smoothed-over cord 2 smooth		Owasco+ Overpeck

TABLE I

No.	Form	Dimensions	Depth	Character	Chipped stone
6	oval	72″x48″	34″	Homogeneous light brown sand fill with charcoal, fire-broken stones, burned-bark fragments, chert chips and block of unweathered argillite, calcined bone fragment.	1 equilateral, straight-base triang. point (white chert) *Chips* 2 white chert 1 red jasper 1 block of unweathered argillite
7	circular	33″	39″	Homogeneous brown sand containing few animal bones, charcoal, fire-broken stones, and chips.	1 equilateral, straight-base triang. point (white chert) *Chips* 3 black chert 3 white chert 1 grey chert
8	circular	50″	27″	Brown sand fill with charcoal concentrated near top in center. Fire-broken stones throughout. Flakes of chert and argillite. In sand under humus near pit mouth occurred weathered argillite blade. Large stemmed point, weathered argillite, in pit fill. Few animal bones.	1 large stemmed point (much weathered argillite) 1 knife (much weathered argillite) *Chips* 1 black chert 1 white chert 6 argillite
9	oval	108″x63″	48″	Fill dark homogeneous sand containing charcoal, clam shells, fire-broken stones, calcined bone, deer bone. At northwest end a smaller pit opened off. This was 30″ in diameter and 22″ deep. Fill in small pit very black and rich in pottery and other artifacts. These included bone implements, effigy pipe, and potsherds of 3 types, viz., O., Overpeck and indeterminate. Deer and other animal remains, chips, etc. Large pit, with light fill, produced Iroquois sherds in upper part only, remainder sterile.	1 broad equilateral, straight-base, triang. point (quartzite) 4 equilateral, concave-base, triang. points (3 black chert, 1 unweathered argillite) 1 knife blade fragment (jasper) 1 broad stemmed point fragment (much weathered argillite) *Chips* 1 black chert 7 white chert 3 red jasper 2 yellow jasper 2 argillite (unweathered)
10	oval	72″x52″	25″	At 15″ a mass of fire-broken stones covered most of the pit area. This extended to 22″. Above and below this feature occurred brown sand with potsherds and scattered fire-broken stones. Burial of small dog occurred near this pit. Refuse bone and clam shells in fill.	1 T-shaped base drill (black chert) *Chips* 1 quartz

Bell Section Cont.

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
		Rims 1 Levanna Cord-on-Cord (?) 2 O. Corded Horiz. 2 O. Platted *Body sherds* 6 corded 4 smoothed-over cord 2 brushed		Owasco
1 fragment of plano-convex adze		*Rims* 1 O. Corded Horiz. 3 O. (too small to type) *Body sherds* 3 corded 7 smoothed-over cord		Owasco
	1 large notched pebble sinker	*Body sherds* Basal portion of pointed bottom pot with corded exterior, smooth inside 1 fabric-marked sherd from topsoil 5 rough sandy body sherds, coarse grit tempered 2 smoothed-over cord 1 corded-stick dec. 2 checked-stamp		Old pit with Owasco intrusions (?)
	3 anvil stones 1 combined anvil, hammer, and muller 2 chipped stone disks 1 trimmed net sinker 1 pebble net sinker	*Rims* 1 O. Corded Oblique 12 O. Corded Horiz. 1 Levanna Cord-on-Cord (?) 4 Overpeck Incised 2 Wagoner Hollow Incised 1 Oneida 1 Iroq. (untyped) 1 indeterminate (corded) *Body sherds* 21 corded 45 smoothed-over cord 41 smooth 15 smooth red ware (Iroq.) *Pipes* 1 effigy pipe bowl (turtle) 1 pottery pipestem rect. in section	1 deer ulna awl	Seems to represent two intersecting pits of two periods, smaller one the older. Iroquois sherds of several pots, one of red ware, from upper 1/3 of large pit. Brass bangle in topsoil over large pit. Owasco+Overpeck in smaller pit.
	2 anvil stones	*Rims* 1 indeterminate (corded) *Body sherds* 4 corded 7 smoothed-over cord 2 checked-stamp 1 smooth, with corded-stick impressions		Possibly a roasting pit. Indeterminate, on pre-Iroq. time level.

TABLE I

No.	Form	Dimensions	Depth	Character	Chipped stone
11	oval	132″x30″	37″	Dark sand directly beneath topsoil 13″ deep produced bulk of artifacts. Below lay lighter sand, sterile except for 40-50 refuse deer bones and 1 bear canine, chips, and spalls.	1 isosceles, concave-base triang. point (black chert) 2 equilateral, concave-base triang. points (black chert and unweathered argillite) 1 equilateral, straight-base triang. point (black chert) 1 keeled-back end scraper (black chert) *Chips* 5 jasper (yellow and red) 3 white chert 2 black chert 2 shale
12	circular bell shaped	27″ top, 29″ bottom	21″	Light sand fill, occasional charcoal fragment with animal bones, chips, fire-broken stones. Two corded body sherds in humus.	1 equilateral, straight-base triangular point (black chert) 1 ovate end scraper (black chert) *Chips* 1 argillite 2 black chert
13	circular	38″	27″	Dark sand fill with charcoal granules and scattered calcined bone fragments, animal bone, fire-broken stones, chips, Iroq. sherd found just under humus covering pit.	2 equilateral, straight-base triang. points (black chert) 1 lanceolate blade (much weathered argillite) *Chips* 2 yellow jasper 1 white chert 1 argillite
14	oval	60″x36″	31″	Stratified. 16″ below base of humus occurred saucer-shaped hearth, 32″ wide, in which charcoal and ashes lay over 1-inch lens of buff-colored ash. Under this complex occurred dark brown sand flecked with charcoal to bottom. 50 deer and elk bones occurred in and under hearth. 1 C.C. Epigonus rim sherd just over hearth. In and below hearth 2 fragments of turtle carapace bowl. 7 trimmed net sinkers from hearth debris. Under hearth 1 O. rim and several body sherds.	*Chips* 4 white chert 2 black chert

Bell Section Cont.

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
	1 rude hoe	*Rims* 1 Levanna Cord-on-Cord (?) 1 O. Platted 1 O. Corded Horiz. 2 O. (too small to type) 5 Overpeck Incised 2 indeterminate (smooth, corded-stick dec.) *Body sherds* 10 corded 15 smoothed-over cord 2 smooth 1 fragment of miniature pot	1 curved perforated needle	Owasco+ Overpeck+ indeterminate One period pit.
		Rims 1 Levanna Cord-on-Cord (?) 1 O. (too small to type) *Body sherds* 7 corded 13 smoothed-over cord 1 smooth		Owasco
		Rims 5 O. (too small to type) 1 indeterminate (rough corded) 1 Hudson Valley Incised *Body sherds* 7 corded 5 smoothed-over cord 15 smooth 1 twig brushed		Owasco+ indeterminate+ Iroquois (latter evidently intrusive)
	7 trimmed net sinkers	*Rims* 1 O. Corded Horiz. 1 C.C. Epigonus *Body sherds* 18 smoothed-over cord 5 smooth	1 worked antler tine 2 fragments turtle-carapace cup	Owasco+ Castle Creek Epigonus

TABLE I

No.	Form	Dimensions	Depth	Character	Chipped stone
15	circular	52″	36″	Homogeneous brown sand fill. Artifacts near top of pit. Contents deer bone, bear claw core, turtle carapace fragments, chips.	1 fragment equilateral triang. point 2 equilateral, concave-base triang. points (black chert and slightly weathered argillite) 1 drill point (black chert) 1 drill expanded scraper base (black chert) *Chips* 3 white chert 3 black chert 2 weathered argillite 3 jasper (yellow and red)
16	oval	43″x40″	48″	Upper 24″ very dark sand fill. Saucer-shaped lens of charcoal at bottom. Below lay homogeneous brown sand. Bottom paved with large boulders. Artifacts nearly all from upper black zone. Deer, bird, small mammal bones, chips, fire-broken stones, etc.	1 isosceles, concave-base triang. point (white chert) 3 equilateral, concave-base triang. points (black chert) 1 end scraper (yellow jasper) *Chips* 5 black chert 4 white chert 4 jasper (red and yellow) 1 weathered argillite
17	circular	32″	33″	Brown sand fill. Stone layer (unbroken and fire-shattered cobbles) midway down. Almost solid layer of deer bone fragments under stones.	*Chips* 1 white chert 1 grey chert
18	circular	26″	14″	Light brown fill, completely sterile.	
19	circular	41″	34″	Upper 8″ brown sand fill containing corded body sherds, punctate-decorated rim, 1 O. rim, 1 Overpeck rim, 1 triang. arrowpoint, 1 sinew stone fragment. Lenticular hearth below (5″ thick). Piece of smooth round pipestem at base of hearth. Brown sand below hearth to bottom. Produced only few corded body sherds.	1 equilateral, concave-base triang. point (black chert) 1 end scraper (yellow jasper) *Chips* 5 white chert 3 black chert

Bell Section Cont.

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
	1 pebble net sinker	*Rims* 2 O. Corded Oblique 1 O. Corded Horiz.		Owasco
	1 trimmed net sinker 3 notched pebble net sinkers 1 partly grooved pebble sinker	*Rims* 1 Levanna Cord-on-Cord (?) 2 Canandaigua Plain (?) 2 O. Corded Collar 3 O. Corded Horiz. 3 O. Corded Oblique 1 O. Herringbone 2 Bainbridge Collared Incised 1 Overpeck Incised 1 indeterminate (corded) *Body sherds* 14 corded 87 smoothed-over cord 1 dentate stamped	1 rough splinter awl	Owasco
		Rims 2 O. Corded Horiz. 1 O. Corded Collar 1 Carpenter Brook Cord-on-Cord (?) 1 push and pull (Bainbridge Linear?) *Body sherds* 16 corded 9 smoothed-over cord 1 fragment of miniature pot		Owasco
	1 sinew stone fragment	*Rims* 1 O. Corded Horiz. 1 Overpeck Incised 1 indeterminate (corded with punctations) *Body sherds* 7 corded 7 smoothed-over cord 2 smooth *Pipes* 1 polished pipestem fragment, round in section		Owasco+ Overpeck+ indeterminate

TABLE I

No.	Form	Dimensions	Depth	Character	Chipped stone
20	circular	23″	20″	Dark sand fill with much charcoal.	
21	circular	36″	35″	Black sand with much charcoal, Unio shells, deer bones.	
22	circular	28″	33″	Stratified. Upper 13″ consisted of brown sand. Deer bone layer near top and at bottom. 3″ ash layer near bottom, over 4″ very black layer, over another 4″ grey ash layer. At 25″, base of upper ash, tubular pipe found. Same level produced smooth sherds. Side-notched white chert knife and 2 miniature pot fragments at same level.	1 broad, side-notched knife (white chert) 1 isosceles, concave base triang. point (black chert) 2 equilateral, concave-base triang. points (black chert) 1 equilateral, straight-base triang. point (black chert) 1 end scraper (black chert) *Chips* 1 white chert 1 black chert 1 yellow jasper
23	circular	69″	45″	Filled with dark sand crossed by lens of black sand 15″ from top. Contained deer bone, fire-broken stones, chips.	1 equilateral, straight-base triang. point (black chert) 1 equilateral, concave-base triang. point (black chert) 2 narrow-stemmed points (much weathered slate) *Chips* 3 yellow jasper
24	oval	60″x41″	38″	Fill brown-stained sand. At bottom lay small concentration of ash and charcoal. Several large sherds of C.C. Epigonus were found throughout pit. Partially disturbed skeleton of large dog found among deer bones. Sherds of C.C. Epigonus pot found here also found in adjoining pit 26 and nearby pit 30. Numerous deer bones, chips.	*Chips* 1 white chert 2 black chert

[2]C.C.=Castle Creek.

Bell Section Cont.

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
		Rims 1 Iroq. (untyped) *Body sherds* 4 smoothed-over cord 2 smooth (1 has Iroq. punctations)		Iroquois
	1 partly grooved pebble net sinker	*Rims* 3 O. (too small to type) *Body sherds* 4 corded 1 smoothed-over cord 1 small nodule of fired clay		Owasco
	1 trimmed net sinker 1 portion of sinew stone	*Rims* 1 O. Herringbone 1 C.C.[2] Beaded 9 O. Corded Horiz. 4 Iroq. (untyped) 3 indeterminate (2 plain-corded, 1 corded-stick over corded) *Body sherds* 42 corded 23 smoothed-over cord 20 smooth *Pipes* 1 tubular pipe 2 miniature pot fragments (2 pots)	3 fragments turtle carapace bowl	Owasco+ Iroquois+ indeterminate
	1 partly grooved pebble net sinker	*Rims* 3 O. Platted 2 Levanna Cord-on-Cord (?) 1 Canandaigua Plain (?) 8 O. Corded Horiz. (and partially restored pot) 1 O. Corded Oblique 1 Overpeck Incised 2 indeterminate (plain corded) *Body sherds* 81 corded sherds 20 smoothed-over cord		Owasco+ Overpeck+ indeterminate
	1 bi-pitted stone 1 rude hoe (?) 4 trimmed net sinkers	*Rims* 3 O. (too small to type) 6 C.C. Epigonus *Body Sherds* 19 smoothed-over cord 3 smooth	*Shell* 2 fragments marine shell (conch columella and whorl)	Owasco+ Castle Creek Epigonus

TABLE I

No.	Form	Dimensions	Depth	Character	Chipped stone
25	oval, bell shaped (widest at mid-point, had small lobate extension on south side)	55″x39″ bottom 45″ lobate extension 18″x15″	35″	Fill light brown homogeneous sand. Partial layer of burned sand and charcoal at 17″. (8″ in dia. and 1″ thick.) Fire-broken stones, Unio shells, deer and bear bones, charcoal and chips throughout fill.	1 equilateral, concave-base triang. point (black chert) *Chips* 2 white chert
26	circular (tangent to pits 24 and 27)	41″	42″	Light brown homogeneous sand fill. Drill at top, sherds below. Few deer bones, chips.	1 expanded side-notched base drill (black chert) *Chips* 4 white chert 2 jasper (red and yellow) 1 grey hornstone
27	circular	38″	35″	Shallow pit adjoining pit 26. Brown homogeneous sand fill. Sterile except for a few refuse deer bones and sherds.	1 equilateral straight-base triang. point (black chert)
28	oval	84″x57″	26″	Homogeneous brown sand fill with some fire-broken stones, chips. Potsherds scattered throughout fill with Owascoid and Iroquoian types appearing at same level less than 3″ apart.	1 equilateral triang. point (black chert) *Chips* 6 white chert 2 black chert 3 jasper (yellow)
29	oval	126″x67″	47″	Brown sand fill, nearly sterile except for pockets of very dark sand near top. Here occurred charcoal, deer bone, chips, fire-broken stones, and most of artifacts.	2 equilateral, straight-base triang. points (black chert) 1 side scraper (yellow jasper) *Chips* 13 white chert 14 black chert 2 jasper
30	circular, bell shaped	36″ (at top) 40″ (at bottom)	56″	Brown sand fill, sterile except for one black level at 21″. Here sherds, refuse bone, and Unio shells occurred. Sherd of C.C. Epigonus which fitted with sherds from Pit 24 found here.	

Bell Section Cont.

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
		Rims 1 Bainbridge Collared Incised 1 O. Corded Horiz. 1 indeterminate (plain weak collar) *Body sherds* 12 corded 2 smoothed-over cord 1 smooth		Owasco+ indeterminate
		Rims 2 O. Corded Horiz. 1 C.C. Epigonus 1 Overpeck Incised *Body sherds* 3 corded 5 smoothed-over cord 3 smooth		Owasco+ Castle Creek Epigonus+ Overpeck
		Rims 1 Levanna Cord-on-Cord (?) *Body sherds* 4 corded		Owasco
		Rims 4 O. Platted 5 O. (too small to type) 1 Hudson Valley Incised 1 Chance Incised 2 Iroq. (too small to type) *Body sherds* 11 corded 17 smooth-over cord 1 smooth		Owasco+ Iroquois Contents suggest early contact of these two groups.
		Rims 5 O. Platted 2 O. Corded Horiz. 2 O. (too small to type) *Body sherds* 3 coarse corded 5 corded (fine) 19 smoothed-over cord 2 smooth		Owasco
	1 notched pebble net sinker	*Rims* 2 O. Platted 1 O. Corded Horiz. 1 Levanna Cord-on-Cord (?) 1 C.C. Epigonus 2 indeterminate (corded) *Body sherds* 1 corded 14 smoothed-over cord 2 smooth		Owasco+ Castle Creek Epigonus+ indeterminate

TABLE I

No.	Form	Dimensions	Depth	Character	Chipped stone
31	oval	41″x60″	43″	Fill graded from black sand in upper part to dark brown at bottom. Very red streaks of burned sand at 17″. Layer of small boulders over part of bottom. Deer, bear, turkey, turtle, etc., bones, chips.	1 oval blade (much weathered argillite) 1 equilateral straight-base triang. point (white chert) 1 fragment "Y"-shaped base drill (black chert) *Chips* 2 white chert 6 black chert 2 jasper (red)
32	oval	48″x33″	52″	Fill very dark sand to 36″ with scattered O. sherds and triang. point. At 36″ occurred layer of small unburned boulders, largest a flat slab 8″-12″ long and 3½″ thick. Roasting platform (?). Light sand below with charcoal granules containing corded body sherds, triang. arrow point, scraper, deer bones, chips, etc.	2 equilateral, straight-base triang. points (black and grey chert) 3 equilateral, concave-base points (grey chert, white chert and unweathered argillite) 1 end scraper (white chert) *Chips* 2 white chert 3 black chert 1 jasper (yellow)
33	circular	37″	24″	Dark homogeneous sand fill with 40 deer bones, 3 Unio shells, and fire-broken stones.	
34	circular	69″	50″	Homogeneous brown-sand fill, with deer bones, bear canine, lower jaw of small dog, Unio shells, chips.	4 equilateral, concave-base triang. points (2 black chert, 1 white chert, 1 lightly weathered argillite) *Chips* 5 white chert 1 black chert 1 jasper (yellow)
35	oval	60″x43″	28″	Fill, brown sand over 2″ black basal layer. Very definite layer of fire-broken stones at bottom over this. One large flat stone, 11x12x3″, in approximate center. Black basal layer contained parts	1 broad-stemmed point (much weathered argillite) 1 small lozenge-shaped point (much weathered argillite)

Bell Section Cont.

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
1 celt poll (in process)	1 combined pebble hammer and anvil stone 1 chipped disk, notched 1 notched pebble net sinker 1 trimmed net sinker	*Rims* 1 O. Corded Oblique 1 O. Corded Horiz. 6 O. (too small to type) 6 Iroq. (too small to type) 2 indeterminate (corded and incised vert. herringbone) *Body sherds* 13 corded 14 smoothed-over cord 3 smooth		Owasco+ Iroquois+ indeterminate
		Rims 2 O. Corded Horiz. 1 O. Platted *Body sherds* 1 corded 8 smoothed-over cord 1 dentate stamped		Owasco
	1 notched pebble net sinker 3 chipped disks, notched 1 fragment hoe blade	*Rims* 4 O. Corded Horiz. 1 O. (too small to type) *Body sherds* 2 corded 12 smoothed-over cord *Pipes* 1 polished pipestem fragment (circular in section)		Owasco
		Rims 1 O. Platted 1 O. (too small to type) 1 Iroq. (too small to type) *Body sherds* 3 corded 5 smoothed-over cord 1 checked-stamp 4 smooth *Pipes* 1 fragment of smooth pipestem (round in section)	1 deer phalangeal cone (perforated by cutting)	Owasco+ Iroquois
2 celts (in process)	2 trimmed net sinkers 1 notched pebble net sinker 1 rude hoe (?)	*Rims* 1 O. Corded Collar 1 O. Corded Horiz. 3 Owasco Corded Oblique 4 O. (too small to type)		Owasco+ indeterminate

TABLE I

No.	Form	Dimensions	Depth	Character	Chipped stone
				of several pots (indeterminate and Owasco), a lozenge-shaped point of much weathered argillite, bones of deer, wolf, elk, turkey, porcupine, etc.	1 equilateral, concave-base triang. point (black chert) 1 pentagonal-shaped point (grey chert) *Chips* 1 white chert
36	circular	33″	34″	Homogeneous dark sand fill containing bones of deer and lynx, calcined bone fragments, chips.	1 equilateral, concave-base triang. point (white chert) *Chips* 38 white chert 3 black chert 1 jasper (red)
37	circular, bell shaped	top 20″, bottom 28″	29″	Homogeneous light brown fill with fire-broken stones, chips. Adjoined Pit 38, both covered with 4″ layer of refuse containing notched net sinker, trimmed net sinker, end scraper, rejected triang. point, base of broad-stemmed chert point, 8 corded body sherds, 3 weathered sherds resembling Vinette 1 type, 1 smooth body sherd.	2 end scrapers (grey chert and yellow jasper) *Chips* 1 white chert 3 black chert 2 jasper (yellow)
38	circular	42″	26″	Yellow sand fill, only top and basal portions deeply stained. Upper portion contained yellow jasper chip, unweathered argillite blank, 1 corded body sherd, 1 smooth body sherd, 1 rim O. Platted. Lower part produced 1 trimmed net sinker, 4 corded body sherds, 1 rim sherd indeterminate.	*Chips* 1 yellow jasper 1 blank of unweathered argillite
39	oval	51″x45″	30″	Fill stained brown sand. All artifacts near top together with few deer bones.	1 equilateral, concave-base triang. point (black chert) 1 end scraper (?) (white chert) 1 medial section blade or point of much weathered argillite
40	circular	52″	36″	Homogeneous brown sand fill, generally sterile.	
41	circular	47″	40″	Dark sand fill, large number of refuse bones, mostly deer, from upper level. Few sherds from this pit fitted pot from Pit 35 (indeterminate). Another sherd	1 equilateral, concave-base triang. point (white chert) *Chips* 2 white chert

Bell Section Cont.

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
		2 pots indeterminate (see Plates 14, 15) *Body sherds* 30 coarse corded 3 fine corded 13 smoothed-over cord 1 dentate stamped		
		Rims 1 indeterminate (possibly O. Corded Horiz.) *Body sherds* 1 corded 10 smoothed-over cord 1 smooth	1 small antler flaker 2 fragments of turtle carapace cup	Owasco (?)
		Rims 1 O. Corded Horiz. 1 Overpeck Incised 1 Kingston Incised 1 indeterminate (corded, annular punctations) *Body sherds* 1 coarse corded 6 fine corded 9 smooth		Owasco+ Overpeck+ Iroquois+ indeterminate
	1 trimmed net sinker	*Rims* 1 O. Platted 1 indeterminate (everted, rudely incised, lip notched) *Body sherds* 5 corded 1 smooth		Owasco+ indeterminate
		Rims 1 O. Corded Collar *Body sherds* 3 smoothed-over cord 8 smooth		Owasco
celt bit		*Body sherds* 1 corded		indeterminate
	1 notched pebble net sinker 1 anvil stone	*Rims* 3 O. Corded Collar 2 Levanna Cord-on-Cord (?) 3 indeterminate (smoothed-over cord, weak collar, 2	1 small antler flaker	Owasco+ indeterminate

TABLE I

No.	Form	Dimensions	Depth	Character	Chipped stone
				pertained to pot in Pit 52 (indeterminate).	1 black chert
42	circular	44″	48″	Bottom 7″ very dark reddish black sand. Above this, light brown sand. Both produced deer and elk bones throughout, as well as sherds of same kind. Pipe bowl fragment from upper level fitted fragment from Pit 80.	1 equilateral, concave-base triang. point (brown jasper) 3 broken triang. points (black chert)
43	oval	86″x44″	24″	Fill consisted of dark sand in upper portion, overlying light sand, overlying 1½″ black sand at bottom. Deer bones and chips throughout.	1 equilateral, concave-base triang. point (white chert) 1 equilateral, straight-base triang. point (black chert) 1 end scraper (black chert) *Chips* 7 white chert 1 black chert 2 jasper (red and yellow)
44	circular, flat bottom	36″	35″	Contents: deer bone, turtle carapace fragments, charcoal, fire-cracked stones, chips.	1 equilateral, concave-base triang. point (black chert) 1 large blank or chopper (much weathered argillite) *Chips* 6 white chert 1 yellow jasper
45	oval	62″x40″	35″	Light brown sand producing fire-cracked stone, charcoal, 1 Unio shell, deer bone and turtle carapace fragments.	1 broad, straight-base asymmetric triang. knife (black chert) (in humus over pit)

Bell Section Cont.

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
		corded-stick decoration, weak collar) *Body sherds* 33 corded (1 coarse) 17 smoothed-over cord 1 smooth		
		Rims 3 O. Corded Collar 1 O. Herringbone 1 O. (too small to type) *Body sherds* 2 coarse corded 16 fine corded 9 smoothed-over cord *Pipes* 1 pipe bowl fragment, smooth, incised decoration (indeterminate)		Owasco
		Rims 1 O. Platted 4 O. (too small to type) 2 C.C. Epigonus 2 indeterminate (incisions look Iroquoian) *Body sherds* 10 corded 10 smoothed-over cord 6 smooth 1 checked-stamp		Owasco+ C. C. Epigonus+ indeterminate
		Rims 2 O. Corded Collar 1 O. Herringbone 1 Levanna Cord-on-Cord (?) 1 indeterminate (decorations broad, interrupted, horiz. incisions) *Body sherds* 21 corded 1 smooth		Owasco+ indeterminate
		Rims 1 O. Platted 3 O. Corded Horiz. 1 O. Herringbone 1 O. Corded Oblique 2 O. (too small to type) *Body sherds* 4 corded 5 smoothed-over cord 2 smooth	1 fragment worked antler tine	Owasco

TABLE I

No.	Form	Dimensions	Depth	Character	Chipped stone
46	circular	34″	25″	Contents: 30 deer bones, fire-broken stones, chips.	*Chips* 1 white chert 2 jasper (red and yellow)
47	circular	42″	30″	Light brown sand fill. Bottom covered with 2″ of very black sand and charcoal. Nearly sterile. Contained 50 broken deer bones found together on the floor.	1 equilateral, concave-base triang. point (black chert)
48	circular	48″	73″	Dark brown fill with many black streaks. At 44″ two small boulders appeared. These were 25″ above bottom. Sherds of rude, thick, indeterminate pot scattered sporadically throughout pit, together with few sherds of thin O. pot. Deer bones and chips present.	2 equilateral, concave-base triang. points (black chert and unweathered argillite) 1 end scraper (black chert) 1 long side scraper (yellow jasper) *Chips* 5 white chert 1 black chert 1 yellow jasper
49	circular	65″	21″	Light brown sand with few black streaks. Very little charcoal or fire-cracked stones.	1 equilateral, concave-base triang. point (grey chert) 1 keeled-back end scraper (yellow jasper)
50	oval	97″x43″	57″	Peripheral fill brown sand with O. sherds scattered throughout. Central part of pit held black fill core in which were intermingled Iroq. and O. sherds. A refuse bone (deer and turtle) accumulation occurred at 14″ and at 18″, each partly covering pit. Bottom covered with 1″ very black sand, underlying 4″ ash, and capped by refuse bone layer. Mass of Unio shells found a few inches above this layer. Many large Onondaga sherds in basal black zone. Evidently an Iroq. period pit was intrusive into the center of a large and older O. pit.	1 equilateral, concave-base triang. point (black chert) 1 equilateral, straight-base triang. point (unweathered argillite) 1 narrow-stemmed proj. point (much weathered argillite) *Chips* 1 white chert 1 jasper (yellow)

Bell Section Cont.

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
	1 pebble hammerstone (black chert)	*Rims* 1 Levanna Cord-on-Cord (?) Sherds of large restorable O. Platted pot 6 O. (too small to type) *Body sherds* 58 corded 7 smoothed-over cord		Owasco
	1 trimmed net sinker	*Rims* 1 O. Corded Horiz. (?) *Body sherds* 1 corded 1 smoothed-over cord 1 smooth		Owasco
	1 notched pebble net sinker 1 partially grooved pebble net sinker 1 anvil stone	*Rims* 3 O. Corded Horiz. 2 O. Platted 1 O. Corded Oblique *Body sherds* 21 corded 30 thick, coarsely corded, coarsely tempered (indeterminate)	1 deer ulna awl	Owasco+ indeterminate
	2 trimmed net sinkers	*Rims* 2 O. Corded Horiz. 6 O. (too small to type) *Body sherds* 17 corded 5 smoothed-over cord		Owasco
1 celt poll		*Rims* 1 O. Corded Horiz. 1 O. Corded Collar 1 C.C. Punctate 1 O. Platted 8 O. (too small to type) 1 Overpeck Incised (?) large portion Oneida pot. 4 Iroq. (too small to type) *Body sherds* 33 corded 3 thick, coarsely tempered 6 smoothed-over cord 2 smooth		Iroquois pit intrusive into larger Owasco pit

TABLE I

No.	Form	Dimensions	Depth	Character	Chipped stone
51	circular	33″	38″	Brown sand fill. Bottom covered with a 2″ black layer which contained 30 deer bones, fire-broken stones and all artifacts found.	1 equilateral, straight-base triang. point (white chert)
52	circular, bell shaped	29″	28″	Dark sand fill containing throughout refuse bones of deer, woodchuck, turkey, turtle, six large Unio shells and many sherds of O., Overpeck and indeterminate types in direct association, demonstrating contemporaneity. Sherd of indeterminate pot found in Pit 41 in this pit. Chance Incised sherd found just below topsoil. Basal few inches of pit covered with mixed ash and black sand overlying burned red subsoil.	1 equilateral, straight-base triang. point (brown chert) 1 narrow-stemmed point (much weathered argillite) *Chips* 1 black chert
53	oval	48″x42″	36″	Dark brown sand fill containing only 1 chip and 8 potsherds.	*Chips* 1 white chert
54	Oval, bell shaped	32″x27″	32″	Dark sand fill, with calcined bone, charcoal, bone refuse, chips. Iroq. sherd at top, O. sherds throughout.	1 rejected triang. point (unweathered argillite) 1 equilateral concave-base triang. point (black chert) *Chips* 5 white chert 1 black chert 2 jasper (red and yellow)
55	circular	35″	37″	Dark brown sand fill with deer bone, calcined bone. Sterile of artifacts except for 7 corded body sherds.	

Bell Section Cont.

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
	1 fragment hoe blade (?) 1 combined hammer and anvil stone	*Rims* 1 Levanna Cord-on-Cord (?) 2 O. Corded Collar 1 O. Corded Horiz. 1 O. Platted 2 O. (too small to type) 1 C.C. Epigonus *Body sherds* 21 corded (fine) 4 coarse corded 8 smoothed-over cord		Owasco+ Castle Creek Epigonus
	2 notched net sinkers 1 chipped-stone disk	*Rims* 11 O. Corded Horiz. 1 O. Platted 1 O. Herringbone 1 Levanna Cord-on-Cord (?) 7 O. (too small to type) 11 Overpeck Incised 2 indeterminate (1 linear-corded decoration; 1 incised and punctated) 1 Chance Incised *Body sherds* 118 corded 24 smoothed-over cord 5 smooth	1 fragment turtle-carapace cup 1 curved perforated needle	Owasco, Overpeck and indeterminate commingled throughout. (Early Iroquois influence at top)
		Rims 1 O. Platted 1 O. (too small to type) *Body sherds* 4 smoothed-over cord 2 smooth		Owasco
	1 notched net sinker	*Rims* 2 O. Herringbone 1 O. Corded Oblique 1 O. Corded Horiz. 1 Levanna Cord-on-Cord (?) 4 O. (too small to type) 1 Chance Incised (or Hudson Valley Incised) *Body sherds* 18 corded 16 smoothed-over cord 2 smooth 1 rude miniature plain pot		Owasco, Iroquois intrusive
		Body sherds 7 corded		indeterminate

TABLE I

No.	Form	Dimensions	Depth	Character	Chipped stone
56	circular	26″	37″	Grey ash-stained sand fill, with charcoal. Layer of fire-broken stones over shallow black basal stratum. Contents: 15 deer-bone fragments and chips.	*Chips* 1 white chert 1 black chert 1 mottled chert
57	circular	25″	40″	Brown sand fill, thin black deposit at base, covered with fire-broken stones. 40 deer and bear bones, charcoal, chips.	*Chips* 2 black chert
58	circular, straight sides	27″	36″	Stained brown sand fill with streaks of charcoal. Thin black basal layer. Bones of deer, bear, turkey, etc., calcined bones, fire-broken stones, and charcoal.	
59	circular	24″	33″	Brown sand fill containing 40 deer bones, calcined bones, 4 Unio shells, fire-broken stones and charcoal.	1 equilateral, concave-base triang. point (unweathered argillite)
60	oval	50″x42″	56″	Stratified pit (?) Upper 13″ of dark charcoal-filled refuse containing O. sherds. Iroq. rimsherds at very top of this. Fill below of light sterile sand to depth of 35″, where layer of fire-broken stones occurred. Among stones were sherds of O. pots. Under stones lay very dark basal layer containing 6 smoothed-over cord body sherds, bearing corded-stick impressions (one has rim vestige—indeterminate). Few deer bones and chips.	1 equilateral, straight-base triang. point (black chert) *Chips* 1 black chert 2 red jasper
61	oval	51″x32″	27″	Brown sand fill containing charcoal, broken stones, calcined bone and chips. Coarsely tempered sherds resemble those from Pit 48.	1 equilateral, straight-base triang. point (black chert) *Chips* 2 yellow jasper

Bell Section Cont.

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
		Rims 2 O. Corded Horiz. 3 O. (too small to type) *Body sherds* 15 corded 13 smoothed-over cord 2 smooth		Owasco
	1 trimmed net sinker	*Rims* 1 O. Corded Horiz. 1 O. Herringbone 1 Carpenter Brook Cord-on-Cord (?) 5 O. (too small to type) *Body sherds* 45 corded 9 smoothed-over cord 4 smooth	1 rough splinter awl	Owasco
	1 partially grooved pebble net sinker	*Body sherds* 8 corded 2 smoothed-over cord *Pipes* 1 pipe bowl fragment (corded-stick decoration)		Owasco
		Rims 2 O. (too small to type) *Body sherds* 11 corded 6 smoothed-over cord		Owasco
	1 thick discoidal hammer stone 1 trimmed net sinker	*Rims* 1 O. Platted 4 O. Corded Horiz. 2 Levanna Cord-on-Cord (?) 1 Carpenter Brook Cord-on-Cord (?) 2 O. (too small to type) 6 indeterminate (corded stick over smoothed-over cord) 2 Iroq. (not typed) *Body sherds* 12 corded (fine) 8 coarse corded 8 smoothed-over cord		Seems stratified and of considerable time span. Indeterminate at base, early (?) Owasco stone layer, later (?) Owasco above. Storage pit; used for roasting; period of disuse then wash accumulated; refuse repository.
	1 notched net sinker	*Rims* 2 indeterminate (cord-on-cord) *Body sherds* 3 corded 7 smoothed-over cord 2 smooth 14 coarsely tempered and corded, some on both sides, indeterminate.		indeterminate

TABLE I

No.	Form	Dimensions	Depth	Character	Chipped stone
62	circular	36″	42″	Dark brown sand fill with bits of charcoal. Outline indefinite.	1 equilateral, straight-base triang. point (black chert)
63	?	?	?	Fill brown sand, with few deer bones and chips.	1 isosceles, straight-base triang. point (black chert) *Chips* 3 white chert 1 black chert 1 unweathered argillite
64	circular, bell shaped	37″ at top, 42″ at bottom	40″	Brown sand fill, grey ash and black sand at bottom. At 23″ occurred mass of fire-broken stones, deer bones and section of O. pot. Bone fragments, including bear mandible, and calcined bone bits scattered throughout.	*Chips* 1 black chert 2 yellow jasper
65	Oval, bowl shaped	57″x37″	43″	Stratified pit. Outline of pit appeared as a thin mass of Unio shells in yellow sand. Below this (upper 7″) in homogeneous yellow sand, were sherds of 3 Iroq. pots. Base of this stratum consisted of second thin layer of Unio shells, capping 8″ layer of brown sand, over 9″ of black sand, then light yellow sand to bottom. Pit fill below base of yellow sand produced remainder of artifacts, plus deer bone, charcoal, and calcined bone.	1 rude blade (much weathered argillite) 2 rude end scrapers (black chert, red jasper) *Chips* 1 white chert
66	circular	47″	38″	Yellow sand lens, 7″ thick, at top of pit. This overlay brown sand fill with darker sand layer at base. Pit nearly sterile. Contained deer bones, calcined bone, charcoal, and fire-broken stones.	*Chips* 1 yellow jasper
67	oval	96″x41″	30″	Pit fill consisted of brown sand. Bottom partially lined with carbonized grass. Deer bone and few small corded body sherds of O. type in fill here. Near center of pit, a cluster of objects was found comprising C.C. Epigonus sherds, Iroq. sherds, antler burnisher (?), and bear tibia beaming tool fragment. At southeast side, 18″ deep in brown sand, large steatite potsherd occurred. Deer bones.	1 isosceles, concave-base triang. point (black (chert) *Chips* 1 much weathered argillite

Bell Section Cont.

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
	1 fragment cylindrical pestle	*Body sherds* 3 corded		indeterminate
	1 hoe	*Rims* 1 O. (too small to type) *Body sherds* 5 corded 4 smoothed-over cord		Owasco
	1 anvil stone 3 trimmed net sinkers	*Rims* 1 O. Platted pot section 1 indeterminate (straight rim with incised dashes) *Body sherds* 12 corded 10 smoothed-over cord		Owasco+ indeterminate
1 small, narrow, slate chisel		*Rims* 1 O. (too small to type) Portions of 3 Iroq. pots, as follows: 1 Oneida-Onondaga 1 Hudson Valley Incised 1 Kingston Incised *Body sherds* 9 corded 7 smoothed-over cord 12 smooth		Iroquois
		Body sherds 2 smoothed-over cord		indeterminate
	1 thick steatite potsherd	*Rims* 1 O. Platted 1 C.C. Epigonus 1 indeterminate (very constricted neck, corded rim) 2 Iroquoian (Hudson Valley Incised ?) *Body sherds* 4 corded 1 double corded (Vinette 1?) 3 smooth	1 bear tibia beaming tool 1 deer antler tine burnisher(?)	May be two intersecting pits. One Owasco and other C.C. Epigonus+ Iroquois+ indeterminate

TABLE I

No.	Form	Dimensions	Depth	Character	Chipped stone
68	circular	40″	38″	Stained sand fill with dark brown basal layer. Bone, charcoal, fire-broken stones.	1 equilateral, concave-base triang. point (black chert)
69	circular	25″	29″	Dark brown sand fill containing deer bones, turtle bones, few Unio shells, fire-broken stones and charcoal.	1 equilateral triang. point (black chert)
70	circular	58″	46″	Brown sand fill, bottom covered with thin layer of dark-brown sand. 30 deer bones, raccoon jaw, calcined bone, fire-broken stones, charcoal and chips included in fill.	3 equilateral, concave-base triang. points (1 white chert, 1 black chert, 1 yellow jasper) *Chips* 3 white chert 1 red jasper
71	circular	28″	47″	Brown-stained sand fill. 2 deer bone fragments and fire-broken stones.	1 ovate end scraper (grey chert) *Chips* 1 yellow jasper
72	circular	36″	25″	Homogeneous brown sand fill. Bone contents in excellent state of preservation. Deer, turtle, and raccoon remains.	1 ovate end scraper (grey chert) 1 equilateral, straight-base triang. point (black chert)
73	circular	44″	56″	Deeply stained sand at top and bottom, light brown sand elsewhere. Apparently a storage pit into which humus, then wash, and then more humus accumulated. Very little refuse contained.	*Chips* 1 white chert 1 brown jasper

Bell Section Cont.

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
	1 trimmed net sinker	*Rims* 1 Overpeck Incised *Body sherds* 2 smoothed-over cord		Overpeck
	1 pebble hammerstone	*Rims* 1 O. Corded Collar 3 O. (too small to type) *Body sherds* 4 corded 11 smoothed-over cord 1 smooth		Owasco
		Rims 1 O. Platted 1 O. Corded Collar 1 O. Corded Horiz. 1 O. Herringbone 1 Owasco Corded Oblique 2 O. (too small to type) 1 C.C. Punctate *Body sherds* 21 corded 6 smoothed-over cord		Owasco
		Rims 1 O. Platted pot (restored) 1 O. Platted 1 O. Corded Horiz. 1 indeterminate (corded, everted rim) *Body sherds* 20 corded 2 smooth		Owasco+ indeterminate
	1 rude narrow chisel 10 trimmed net sinkers	*Rims* 1 O. (too small to type) 1 indeterminate (punctated triangles) 6 Iroq. (untyped) 3 partly restored Iroq. pots (untyped) *Body sherds* 7 corded 3 smoothed-over cord 1 checked-stamp 35 smooth	1 fragment comb top (antler) 1 fragment turtle carapace cup	Iroquois
		Rims 1 Overpeck Incised *Body sherds* 1 corded body 2 smoothed-over cord		Overpeck

TABLE I

No.	Form	Dimensions	Depth	Character	Chipped stone
74	oval	60″x40″	36″	Brown sand fill, either large pit or two intersecting pits. Fill brown sand except upper part of northeast end which was very dark and contained all artifacts found and most of refuse. Deer and elk bones and chips.	2 equilateral, concave-base triang. points (grey chert) (yellow jasper) 1 equilateral, straight-base triang. point (slightly weathered argillite) *Chips* 1 black chert 2 weathered argillite
75	circular, bell shaped	?	?	Light sand fill, nearly sterile.	
76	oval	42″x33″	46″	Stained brown sand fill—dark at bottom. 11 deer bones, few fire-broken stones, charcoal.	1 end scraper (white chert) 3 equilateral, concave-base triang. points (black chert)
77	oval	48″x13″	26″	A large quantity of Unio shells, 50 deer, turtle and turkey bones. Iroq. sherds concentrated at one end; may indicate secondary deposit.	1 broad, concave-base asymmetric point or knife (black chert) 1 equilateral, concave-base triang. point (black chert)
78	circular	44″	42″	Lightly stained homogeneous sand, heavily flecked with charcoal. Nearly sterile. Contained few decayed deer bones and fire-cracked stones.	
79	circular	28″	26″	Dark brown homogeneous sand fill, containing many fire-broken stones, deer and calcined bone, chips.	1 equilateral, concave-base triang. point (black chert) *Chips* 2 jasper (red and yellow)

Bell Section Cont.

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
	1 trimmed net sinker	*Rims* 2 Owasco Corded Oblique 2 O. Corded Horiz. 3 O. (too small to type) 3 indeterminate (2 Levanna Cord-on-Cord ?; 1 straight corded) *Body sherds* 10 corded 18 smoothed-over cord		Owasco+ indeterminate
re-used celt, badly broken	1 anvil stone			indeterminate
	1 anvil stone	*Rims* 1 Levanna Cord-on-Cord (?) 2 O. (too small to type) *Body sherds* 1 corded 8 smoothed-over cord 6 smooth		Owasco
1 small narrow chisel	1 trimmed net sinker	*Rims* 1 O. (too small to type) 2 Overpeck Incised 4 Iroq. (look Oneida-Onondaga) 1 indeterminate (push and pull) *Body sherds* 1 corded 12 smoothed-over cord 9 smooth *Pipes* 1 section pipestem, polished, round in section.		May represent two periods. Owasco+ Overpeck+ Iroquois+ indeterminate
		Body sherds 4 corded		indeterminate
		Rims 1 O. Corded Horiz. 3 O. (too small to type) 1 Iroq. (too small to type) *Body sherds* 5 smoothed-over cord 2 smooth		Owasco pit (Iroquois sherd probably intrusive)

TABLE I

No.	Form	Dimensions	Depth	Character	Chipped stone
80	circular	46″	25″	Homogeneous brown sand fill. Few deer bones, calcined bone bits, fire-broken stones.	1 equilateral, concave-base triang. point (black chert) 1 drill point (black chert) *Chips* 1 yellow jasper
81	circular	36″	28″	Homogeneous dark sand fill. Contained refuse bones, fire-broken stones, etc.	1 equilateral, straight-base triang. point (black chert)
82	circular	36″	40″	Brown sand fill. Pit lined with carbonized bark. Contained many fire-broken stones, deer bones, and Unio shells. No artifacts.	
83	oval	72″x65″	53″	Uniform brown sand fill. Contained refuse bones and calcined bone fragments.	*Chips* 1 yellow jasper
84	circular	44″	42″	Upper fill nearly homogeneous and sterile brown sand. Half a stone gorget and 6 Owascoid sherds found here. At 6″ above bottom occurred 2″ compact layer of clam shells, entirely sterile. Below shell, which covered pit, lay many Iroquoian sherds of 2 pots, plus one broad O. type triang. point.	1 equilateral, concave-base triang. point (black chert)

Bell Section Cont.

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
		Rims 1 O. Platted 1 O. Corded Horiz. *Body sherds* 2 corded *Pipes* Fragment of pipe bowl fitting fragment from Pit 42		Owasco
	1 trimmed net sinker	*Rims* 3 Levanna Cord-on-Cord (?) 2 indeterminate (corded; square dentate) *Body sherds* 1 coarse corded 3 fine corded 1 fabric impressed		Early (?) Owasco+ indeterminate
				indeterminate
	1 trimmed net sinker 1 chipped disk, notched	*Rims* 1 O. Herringbone 1 Overpeck Incised *Body sherds* 4 fine corded 4 coarse corded 9 smoothed-over cord 1 smooth		Owasco+ Overpeck
half of rect. gorget or pendant		*Rims* 3 O. (too small to type; one may be O. Corded Oblique, another O. Corded Horiz.) 2 large portions of Iroq. pots—one restored, both Chance Incised. *Body sherds* 1 corded 2 smoothed-over cord		Early Iroquois pit. (Upper fill intrusive)

No.	Form	Dimensions	Depth	Character	Chipped stone
1	oval	34″x22″	49″	Brown sand fill in upper portion, 30″ thick. At base of sand burial No. 1 occurred. Under burial was 2″ layer of yellow sand, capping 17″ dark stratum. This black basal deposit contained animal bones, fish scales, fire-broken stones, and artifacts.	1 equilateral, concave-base triang. point (black chert)
2	circular	16″	24″	Brown homogeneous fill, containing deer bones, calcined bone fragments, 3 Unio shells, fire-broken stones, charcoal, chips.	1 isosceles, concave-base triang. point (unweathered argillite)
3	circular	36″	34″	Homogeneous brown sand fill. Three large boulders on bottom. Fire-broken stones, bone refuse, calcined bone bits, and charcoal.	2 equilateral, straight-base triang. points (1 white chert, 1 black chert) 1 equilateral, concave-base triang. point (black chert)
4	oval	60″x50″	60″	Dark upper fill, 6″-12″, rich in artifacts. Overlay compact stratum of Unio shells, 48″ in breadth and 6-12″ thick. This contained a few O. potsherds. A layer of fire-broken stones occurred in the shell and another beneath it in brownish stained sand layer, nearly sterile and 10″ deep. Beneath this zone and also covering pit, was black sand stratum 6-8″ thick, with numerous fire-broken stones at base. Then 2″ of stained sand (not continuous over the whole pit) covered a very dark basal sand deposit, 11″ deep. The two lower dark strata were rich in potsherds and other artifacts, plus refuse bones of deer, bear, and fish.	2 isosceles straight-base triang. points (black chert) 4 equilateral concave-base triang. points (black chert) 2 equilateral straight-base triang. points (white, black) 1 broad side-notched point (brown chert) 1 narrow side-notched point (much weathered argillite) 1 end scraper (black chert) *Chips* 3 white chert 6 jasper (red and yellow)

Section

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
	4 notched pebble net sinkers 4 trimmed net sinkers	*Rims* 1 Iroq. (?) 4 indeterminate (1 punctated, 3 plain) *Body sherds* 4 corded 9 smooth		indeterminate
		Rims 1 O. (too small to type) 1 partially restored pot, C.C. Epigonus 1 Chance Incised 2 indeterminate (1 plain; 1 incised, crosshatched collar, fitted sherd from bottom of Pit 4) *Body sherds* 1 corded 1 smoothed-over cord 9 smooth		Owasco+ C.C. Epigonus+ Iroquois+ indeterminate
		Rims 4 C.C. Epigonus *Body sherds* 2 corded 6 smoothed-over cord 14 smooth *pipes* 1 bowl fragment, trumpet type		Castle Creek Epigonus
2 celts in process 1 gorget or pendant fragment	1 notched net sinker 2 trimmed net sinkers 1 anvil stone 1 combined pebble, hammer and anvil stone	*Rims* 2 O. Corded Collar 3 O. Platted 1 O. Herringbone 4 C.C. Beaded 5 O. (too small to type) 3 Chance Incised 1 Overpeck Incised 3 indeterminate (2 red ware, incised; 1 collared crisscross) *Body sherds* 36 corded 6 smooth		Pit may have been originally dug for storage, then used for refuse, later accumulating scanty wash. More refuse followed by longer period when wash accumulated. Then refuse of shell feast; finally shell-less refuse at top. Two periods of occupation may be indicated by lower and upper refuse, separated by deep compact shell layer. However, similar types of pottery from all levels indicate single culture (*cont. on p. 233*)

TABLE I

No.	Form	Dimensions	Depth	Character	Chipped stone
4					
5	oval	44″x39″	50″	Dark sand fill to depth of 44″. Under this lay grey-black sand to bottom. Nearly sterile below 24″. Depths to rimsherds: O. Corded Collar 9 and 11″. Hudson Valley Incised 6″. Indeterminate 5″.	1 equilateral concave-base triang. point (grey chert) 1 end scraper (black chert) *Chips* 1 white chert 1 black chert
6	circular	48″	35″	At top occurred dense deposit of small Unio shells, 40″ in diameter and 6″ deep. Beneath this occurred brown stained sand to depth of 16″. Scattered body sherds of smooth pot in this fill (indeterminate). Few other sherds and chips intermingled.	1 equilateral concave-base triang. point (black chert) *Chips* 1 black chert 1 core (grey chert) 1 yellow jasper
7	circular	64″	47″	Dark sand fill containing streaks of very dark sand.	1 reject knife (brown chert) *Chips* 2 jasper (red and yellow)
8	circular	41″	28″	Dark brown sand fill; contained animal bones, calcined bones, charcoal, fire-broken stones and chips.	1 narrow-stemmed point (much weathered argillite) 1 expanded base drill (grey chert) 1 strike-a-light (?) (yellow jasper) *Chips* 2 black chert 2 jasper (red and yellow)
9	circular	35″	40″	Dark sand fill. Bed of fire-broken stones near base. This overlay fire-reddened sand. Charcoal and calcined bones in fill.	1 equilateral concave-base triang. point (slightly weathered argillite) 1 equilateral straight-base triang. point (black chert) 1 broken knife (yellow jasper) *Chips* 1 grey chert 3 yellow jasper

Philhower Section Cont.

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
				throughout. Mixed culture pit, evidently of one time period. (See text.) Owasco+ Overpeck+ Iroquois+ indeterminate
		Rims 2 O. Corded Collar 1 Levanna Cord-on-Cord (?) 3 O. (too small to type) 2 indeterminate (plain; incised) 2 Hudson Valley Incised *Body sherds* 5 corded 2 smoothed-over cord 2 smooth		Owasco+ Iroquois+ indeterminate
		Rims 1 O. Corded Collar 1 partially restored pot (indeterminate) (See Plate 17 fig. 1) *Body sherds* 5 corded 3 smoothed-over cord 3 smooth		Owasco+ indeterminate
		Rims 2 O. Corded Horiz. 1 O. (too small to type) *Body sherds* 1 corded 3 smoothed-over cord		Owasco
		Rims 1 O. Corded Horiz. *Body sherds* 2 coarsely corded 7 smoothed-over cord		Owasco
1 celt (fragment)	1 cylindrical pestle (fragment)	*Rims* 1 O. Corded Oblique 1 Levanna Cord-on-Cord (?) *Body sherds* 3 corded 2 smoothed-over cord		Owasco

TABLE I

No.	Form	Dimensions	Depth	Character	Chipped stone
10	circular	41″	27″	Brown sand fill. 1″ black layer near bottom over 2″ zone of burned red sand. Fire-broken stones and chips.	2 equilateral concave-base triang. points (black chert) *Chips* 2 jasper (red and yellow)
11	oval	48″x39″	36″	Stratified. Top 18-24″ dark refuse over 0-3″ yellow sand, over 0-4″ charcoal, over 2″ burned red sand, over 8-12″ stained yellow sand. All artifacts in top zone of refuse. Deer bone in basal sand layer; chips in top zone.	1 equilateral straight-base triang. point (red jasper) *Chips* 2 yellow jasper
12	oval	60″x58″	46″	Dark sand fill with 2 lenses of black soil and charcoal, 6″ below topsoil. Two round dark areas, one on either side, extending to pit base, suggested post molds. Contents confined largely to upper 1/3 of pit. Contents: refuse bone, calcined bone fragments, charcoal, fire-broken stones, chips.	2 equilateral concave-base triang. points (black chert) 1 triang. drill (white chert) 1 end scraper (brown chert) *Chips* 3 white chert 1 black chert 2 yellow jasper
13	circular	42″	37″	Brown sand fill. At 20″ lay a 5″ stratum of red burned sand containing small granules of charcoal.	1 broken (grey chert) blade
14	circular	?	72″	Stratified. Fill consisted of alternate deposits of black refuse and yellow sand layers (wash?). At 24″ lay a very black deposit 1″ thick; overlay especially heavy layer of wash. All artifacts from upper 12″ of pit fill, except one sherd and one triang. point blank from bottom. Kaolin pipestem in topsoil. Refuse bones, calcined bone bits, fire-broken stones, etc.	1 drill, expanded base (black chert) 1 equilateral straight-base triang. point (in process) (mottled hornstone) 1 broad side-notched point (much weathered argillite) *Chips* 5 black chert 4 jasper (red and yellow) 1 shale
15	circular basin shaped	46″	19″	Brown sand fill containing several large pieces of charcoal and chips.	1 broad side-notched point (much weathered argillite) *Chips* 1 grey chert 1 black chert 1 red jasper
Test Pit 1	section trench on slight slope	63″ long x 35″ wide		Under 7″ topsoil occurred 17-24″ brown sand overlying yellow subsoil. Artifacts occurred in topsoil and brown sand. No difference in typology of each except historic piece found in topsoil. Contained fire-broken stones and chips.	1 equilateral concave-base triang. point (black chert) *Chips* 3 grey chert 2 black chert 3 yellow jasper

Philhower Section Cont.

Artifacts				Remarks
Polished stone	Rough stone	Pottery	Bone	
		Rims 1 Levanna Cord-on-Cord (?) 1 indeterminate *Body sherds* 6 corded 1 smooth		Owasco+ indeterminate
	1 notched pebble net sinker	*Rims* 1 O. (too small to type) *Body sherds* 2 corded		Owasco
		Rims 2 O. Corded Oblique 2 O. (too small to type) 2 indeterminate (plain collared; roughly incised) *Body sherds* 5 corded 6 smoothed-over cord		Owasco+ indeterminate
				indeterminate
		Rims 3 O. (too small to type) 1 Iroquoian (not typed) 2 indeterminate (corded; corded-stick on cord) *Body sherds* 6 corded 4 smoothed-over cord *Pipes* 1 pipestem fragment round, smooth but not polished 1 kaolin pipestem fragment		Iroquois+ indeterminate
		Body sherds 2 corded		indeterminate
		Rims 3 O. Corded Horiz. 2 Iroquoian (too small to type) 2 indeterminate (smooth) *Body sherds* 16 corded 2 smoothed-over cord 5 smooth 4 checked stamp *Other artifacts* 1 iron clasp knife blade		

TABLE II
TRAITS

Category	Plate No.	Fig. No.	Trait	Frequency
Chipped Stone				
Projectile points	7	16-19	triangular, equilateral, straight base	35
	7	20-28	triangular, equilateral, concave base	71
	7	29	triangular, isosceles, straight base	3
	7	30-34	triangular, isosceles, concave base	5
			pentagonal-shaped	1
	7	40	broad, side-notched, thin	1
Knives			ovate	2
	7	39	broad, side-notched, convex edges	1
	7	42	triangular, straight base, asymmetric	1
			triangular, concave base, asymmetric	1
Scrapers	7	48-52	ovate, end	19
	7	47	keeled-back, end	2
	7	41	retouched flake, side	2
Drills			expanded base	3
	7	44	expanded side-notched base	1
			expanded scraper base	1
			T-shaped base	1
	7	43	Y-shaped base	1
			triangular	1
Strike-a-lights(?)			triangular, biconvex in section	1
Polished Stone				
Celts	8	14	thick-polled (fragmentary)	8
Adzes			plano-convex	1
Chisels	7	46, 53	thin, narrow	3
Gorgets or pendants	7	45	rectanguloid, convex ends (fragmentary)	2
	9	11	rectanguloid, convex ends, two-holed	1[1]
Pendants	9	6	thin, trianguloid, apex perforated, edges scalloped, surface rudely incised with horizontal and oblique parallel and crisscross lines	1[2]
	9	5	trapezoidal, two-holed, human-face effigy in relief	1[3]
Rough Stone				
Hammer-stones	8	17, 20	unpitted pebble	3
			thick discoidal	1
Anvil stones	8	1	scarified pebble	13
Pestles	8	21	cylindrical	2
Combination tools			combined hammer and anvil	5
			combined hammer, anvil and muller	1

[1]In Philhower collection.
[2]In Philhower collection.
[3]In Philhower collection.

Table II, Cont.

Category	Plate No.	Fig. No.	Trait	Frequency
Hoes	8	13, 19	ovate or trianguloid, rudely chipped	6
Net sinkers	8	3	notched flat pebble	21
	8	10-12	notched rectangular, trimmed flat pebble	41
	8	18	notched large thick pebble	1
	8	9,16	thick pebble, partly grooved short axis	5
Disks			thin, chipped circumference	3
	8	4	thin, chipped circumference, notched opposite sides	5
Sinew stones			thin pebble, multiple shallow grooves	2
Chisels	7	54	rude, narrow blade	1
Pitted stones	8	2	thick pebble, conical pit on opposite sides	2
"Pattern stones"	9	9, 10	oval slate pebble, 3 zoned Iroquois triangle complex "patterns" incised on one face	1[4]
Effigies			rude effigy of human face on rectangular-shaped pebble, 6″ high	1[5]
Bone and Antler				
Awls			rough splinter, mammal long bone	2
			polished splinter, mammal long bone	1[6]
			deer antler tine	1
	7	4	deer ulna	3[7]
			turkey tibia	1[8]
Needles	7	10, 11	thin, curved, perforated	2
Flakers	7	7	antler, cylindrical, small	4[9]
Beaming tools	7	2	bear tibia	1
Picks			deer antler, brow tine sharpened to chisel edge, others removed	1[10]
Dishes	7	3, 8	box turtle carapace, smoothed all over	9
Cones	7	5	deer phalange, base cut off, apex perforated by cutting	1
Tubes			short tube, of bird bone	1[11]
Combs	7	1	antler, rectangular top (?), drilled-pit and notched decoration, multiple teeth (?) (fragment)	1
	9	7	antler, horseshoe-shaped top, drilled-pit decoration, multiple teeth (top only)	1[12]
	9	8	bone, trianguloid top, edges serrated, drilled-pit and engraved line decoration, 2 teeth ? (top only)	1[13]
Polisher?			deer antler beam section, end rounded	1
Shell				
Beads	9	4	large discoidal	1[14]

[4]In Philhower collection, which also contains fragment of another showing single zone of decoration (plate 9, fig. 10).
[5]In Philhower collection.
[6]In Philhower collection.
[7]One in Philhower collection.
[8]In Philhower collection.
[9]Two in Philhower collection.
[10]In Philhower collection.
[11]In Philhower collection.
[12]In Philhower collection.
[13]In Philhower collection.
[14]In Philhower collection.

Table II, Cont.

Category	Plate No.	Fig. No.	Trait	Frequency
Worked sections	7	9	small conch columella	1
	7	9	ovate section of conch whorl	1
Ceramics				
Vessel types				
Owasco	10	3	Levanna Cord-on-Cord (?)	25[15]
			Carpenter Brook Cord-on-Cord (?)	6
			Canandaigua Plain (?)	6
	10	18	Owasco Herringbone	12
	11	1, 3	Owasco Corded Horizontal	107[16]
	10	12, 14	Owasco Corded Oblique	23[17]
	12		Owasco Platted (3½ restored pots)	122[18]
	10	17, 21	Owasco Corded Collar	54[19]
	10	13, 16	Castle Creek Beaded	5
			Castle Creek Punctate	3[20]
	10	9, 11	Bainbridge Collared Incised	4[21]
			Bainbridge Linear	2[22]
			Owascoid (type uncertain due to small size of sherd)	120
Iroquoian	18		Chance Incised (5 wholly or largely restored pots)	99[23]
	20	4	Hudson Valley Incised	15[24]
			Hudson Valley Crescent Incised	6[25]
	20	1	Kingston Incised	6[26]
			Wagoner Hollow Incised	2
	20	2, 3	Oneida-Onondaga (not typed)	9[27]
	19		Iroquoian (not typed, or too small to identify)	65[28]
Castle Creek Epigonus	13	8, 11, 14	constricted neck; everted collared rim, with or without castellations; lip flat or outsloping, smooth or corded; body smooth; triangle complex design on collar in corded-stick imprints	121[29]
	13	12	constricted neck; everted collared rim with castellations; smooth flat lip; body corded; triangle complex design on collar and at intervals on neck (fig. 12 has hourglass figures) executed in corded-stick or linear incisions	4[30]
	13	5, 9, 10	constricted neck; inverted collared rim; flat or insloping smooth or corded lip;	

[15]One in Philhower collection.
[16]Seven in Philhower collection.
[17]Two in Philhower collection.
[18]Eleven in Philhower collection (2 restored pots, counted as 40 sherds).
[19]Eight in Philhower collection (1 restored pot, counted as 20 sherds).
[20]One in Philhower collection.
[21]Two in Philhower collection.
[22]One in Philhower collection.
[23]Fourteen in Philhower collection (2½ pots, counted as 50 sherds).
[24]Nine in Philhower collection.
[25]All in Philhower collection.
[26]Four in Philhower collection.
[27]Two in Philhower collection.
[28]Four in Philhower collection.
[29]Three in Philhower collection. Fig. 14 counted as 5 sherds.
[30]One in Philhower collection.

Table II, Cont.

Category	Plate No.	Fig. No.	Trait	Frequency
			body smooth; collar and neck (except fig. 5) ornamented with parallel horizontal rows of cord impressions and single or multiple rows of short oblique linear punctations or corded impressions	6[31]
			constricted neck; inverted collared rim; smooth rounded lip; body corded; collar ornamented with parallel horizontal rows of cord impressions, interrupted by groups of three parallel oblique lines similarly executed; neck has obtuse-angle triangles filled with oblique lines, all done as above, row of oval punctations at base of collar and shoulder	1[32]
	13	13	constricted neck; inverted collared rim with castellations; lip smooth and flat or ornamented with row of punctations; body smoothed-over cord or checked-stamp paddled; collar decorated with parallel horizontal rows of small annular or circular punctations, interrupted by groups of four parallel vertical lines similarly done, neck bears vertical or oblique plats composed of short oblique linear punctations or overall pattern of circular punctations	9[33]
Overpeck Incised	13	1, 3, 4, 7	slightly everted rim; flat lip; broad, incised, complicated ornamentation, consisting of herringbone design, vertical, oblique and horizontal linear patterns; paste buff or seal brown	37
Indeterminate	16	15, 16	straight rim; smooth flattened or rounded, or corded lip; corded exterior	20
	16	22, 23	straight rim; smooth flattened or rounded, or corded lip; corded exterior overlaid with weak corded stick decorations	8
			straight rim; corded lip and exterior; overlaid with rude punctations	1
			slightly everted rim; thin notched lip; corded exterior	1
	16	17	slightly everted rim; notched lip; broad incised and annular impressed decorations	1
			slightly inverted rim; outsloping lip; short, irregular, incised, horizontal linear decorations	1
			smooth, plain, collared	3
			slightly everted rim; thin lip; incipient collar; smoothed-over cord exterior	1
			straight rim; trough-shaped lip, obliquely corded across and vertically corded on anterior edge; plain exterior	1
			straight, thickened rim; wedge-shaped lip,	

[31]One in Philhower collection.
[32]In Philhower collection.
[33]One in Philhower collection.

Table II, Cont.

Category	Plate No.	Fig. No.	Trait	Frequency
			corded obliquely on anterior surface; horizontal, parallel rows of corded-stick decoration on rim	1
	16	19	slightly everted rim; thickened, flat or outsloping corded lip; smoothed-over cord exterior	4
	10	4, 5	slightly everted rim; flat or outsloping corded lip; linear punctations on upper rim	2
	16	18	slightly inverted rim; flat lip; collar; incised tessellated design	1
			straight rim; flat lip; plain smooth exterior	2
			straight rim; flat lip; corded-stick decoration	2
			straight rim; rounded lip; short, oblique, incised dashes in two parallel rows around upper rim	1
	13	2	everted rim; rounded lip; parallel horizontal and short oblique linear decoration in fine corded-stick impressions	2
	10	1	much constricted neck; everted rim; flat lip, notched along outer edge; two parallel cord-imprinted lines on upper rim	1
			everted, thickened rim; rounded lip; parallel linear push-and-pull ornamentation	1
	17	2	globular checked-stamp impressed body; thickened everted rim; flat notched lip; single row of short, oblique, incised, dashes under rim	1 pot
	17	1	short, semiconical smooth body; much constricted neck	1
	15		globular, coarsely corded body; constricted neck; everted rim; outsloping indented lip; rude vertical and oblique incisions in rough parallel rows on rim	1 pot
	14		elongated, semiconoidal, coarsely corded body; constricted neck; outsloping corded lip; vertical plats of comb-marked (?) decoration on neck and rim	1 pot
Surface	14		coarsely corded	73
treatment	12		finely corded	1237
(body	11	1	smoothed-over cord	783
sherds)	17	1	smooth	334
	17	2	checked-stamp	37
			square dentate stamp	1
			corded-stick imprinted	7
			brushed-over cord	2
			twig brushed	1
			incised push and pull	1
			loosely woven fabric	1
Miniature pots	16	8	plain, rudely made	5
			with weak platted decorations	1
Clay nodules			kneaded flattened mass of potter's clay	1
Pipes	16	2	effigy bowl, oval in section, depicting conventionalized turtle	1
	16	3	bowl fragment, polished, decorated with	

Table II, Cont.

Category	Plate No.	Fig. No.	Trait	Frequency
			broad encircling incisions and drilled pits	1
			bowl fragment, trumpet type, pit decoration	1
			bowl fragment, corded-stick decoration	1
	16	1	tubular, tapering, weak incised crisscross patterns all over	1
	9	3	obtuse angle elbow type, bowl and stem rectangular in section, bowl ornamented with 3 groups, two of 3, one of 2 horizontal incised lines	1[34]
	16	7	stem fragment, rectangular in section, sides vertically cord impressed	1
	16	6	stem fragment, polished, circular in section, hole punched	6
Chipped stone materials	7	13-20	black chert implements	94
			chips, spalls, rejects	99
	7	35, 39	white chert implements	25
			chips, spalls, rejects	191
	7	34, 51	gray chert implements	10
			chips, spalls, rejects	7
	7	37	brown chert implements	3
			chips, spalls, rejects	3
	7	40	mottled gray and brown chert or hornstone implements	1
			chips, spalls, rejects	1
	7	29, 41	jasper, yellow, implements	13
			chips, spalls, rejects	60
	7	52	jasper, red, implements	6
			chips, spalls, rejects	27
			jasper, brown, implements	2
			chips, spalls, rejects	3
	7	50	chalcedony implements	1
	7	26, 28	argillite, unweathered implements	8
			chips, spalls, rejects	9
	7	21, 27	argillite, slightly weathered implements	4
			chips, spalls, rejects	11
			quartzite implements	1
			crystal quartz implements	1
Burials	5	B	flexed, loosely	x
	4	B	flexed, tightly	x
			extended (later)	x
			grave goods (rare)	x
	5	B	burial in cache pit	x
Miscellaneous	5	A	small breed of dog	x
			large breed of dog	x
	5	A	separate dog burial	x
			hearths (often in small shallow pits)	x
	4	A	deep cache pits, sometimes lined with charred grass	x
	2	A & B	concentration of clam shells in pits	x
			shallow, broad pits	x

[34]In Philhower collection.

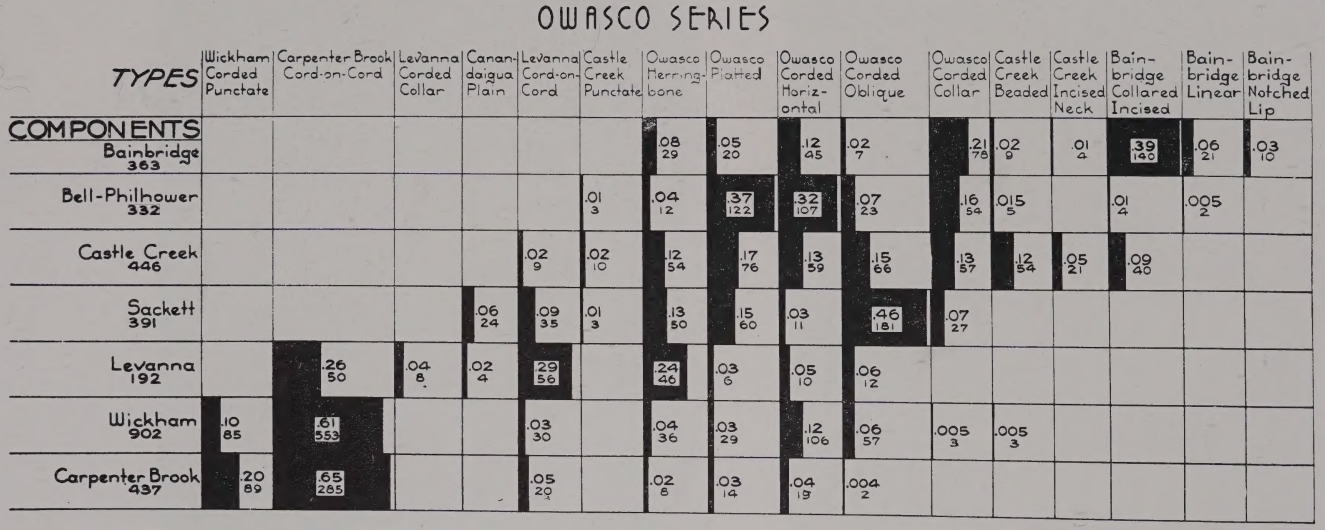

OWASCO SERIES
TYPES
Wickham Corded Punctate
Carpenter Brook Cord-on-Cord
Levanna Corded Collar
Canandaigua Plain
Levanna Cord-on-Cord
Castle Creek Punctate
Owasco Herringbone
Owasco Platted
Owasco Corded Horizontal
Owasco Corded Oblique
Owasco Corded Collar
Castle Creek Beaded
Castle Creek Incised Neck
Bainbridge Collared Incised
Bainbridge Linear
Bainbridge Notched Lip
COMPONENTS
Bainbridge 363
.08 29
.05 20
.12 45
.02 7
.21 78
.02 9
.01 4
.39 140
.06 21
.03 10
Bell-Philhower 332
.01 3
.04 12
.37 122
.32 107
.07 23
.16 54
.015 5
.01 4
.005 2
Castle Creek 446
.02 9
.02 10
.12 54
.17 76
.13 59
.15 66
.13 57
.12 54
.05 21
.09 40
Sackett 391
.06 24
.09 35
.01 3
.13 50
.15 60
.03 11
.46 181
.07 27
Levanna 192
.26 50
.04 8
.02 4
.29 56
.24 46
.03 6
.05 10
.06 12
Wickham 902
.10 85
.61 553
.03 30
.04 36
.03 29
.12 106
.06 57
.005 3
.005 3
Carpenter Brook 437
.20 89
.65 285
.05 20
.02 8
.03 14
.04 19
.004 2

FIGURE 1

A

B

PLATE 2. PITS CONTAINING ABUNDANT CLAM SHELLS

A. Stratified refuse-filled pit on Bell Section. B. Top of partially shell-filled pit on Philhower Section.

A

B

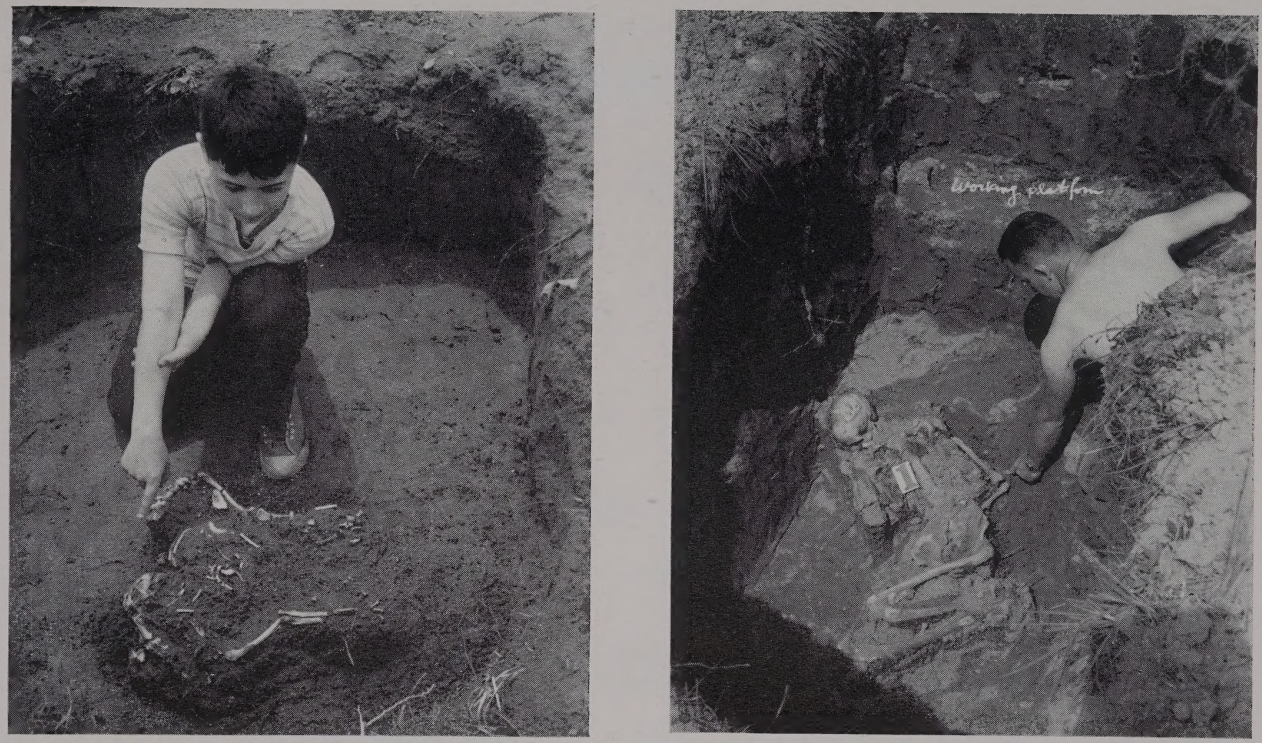
PLATE 3

A. Deep pit with homogeneous fill on Bell Section. B. Stratified refuse-filled pit on Philhower Section.

A

B

PLATE 4. *A. Deep pit with homogeneous fill on Bell Section. B. Burial 2, closely flexed adult female, Bell Section.*



A B

PLATE 5

A. Burial of small breed of dog, Bell Section. B. Burial 1, loosely flexed adult male, at bottom of deep, refuse-filled cache pit on Bell Section.

PLATE 6. POTTERY AND STONE ARTIFACTS OF EARLIER HORIZON ON BELL-PHILHOWER SITE

1, restored basal section of conoidal pot of coarsely grit-tempered red ware with corded exterior; 2, 3, 8, 9, 10, narrow, stemmed points; 12, 16, 17, broad, stemmed points; 11, narrow, side-notched point; 5, 6, broad side-notched points; 4, lozenge-shaped point; 14, lanceolate point; 7, triangular point; 13, triangular knife; 15, ovate knife; 18, steatite vessel fragment.

Provenience: Figs. 1, 11, 13 (topsoil), Pit 8; fig. 2, Pit 23; fig. 3, Pit 52; figs. 4, 16 (topsoil), Pit 35; fig. 5, Pit 14, Philhower (topsoil); fig. 6, surface; figs. 7, 8, 9, Pit 4 (topsoil); fig. 10, Pit 50 (topsoil); fig. 12, Pit 9 (topsoil); fig. 14, Pit 13; fig. 15, Pit 31; fig. 17, Pit 41 (topsoil); fig. 18, Pit 67.

Material: Figs. 2, 3, deeply weathered shale; figs. 4-17, much-weathered argillite.

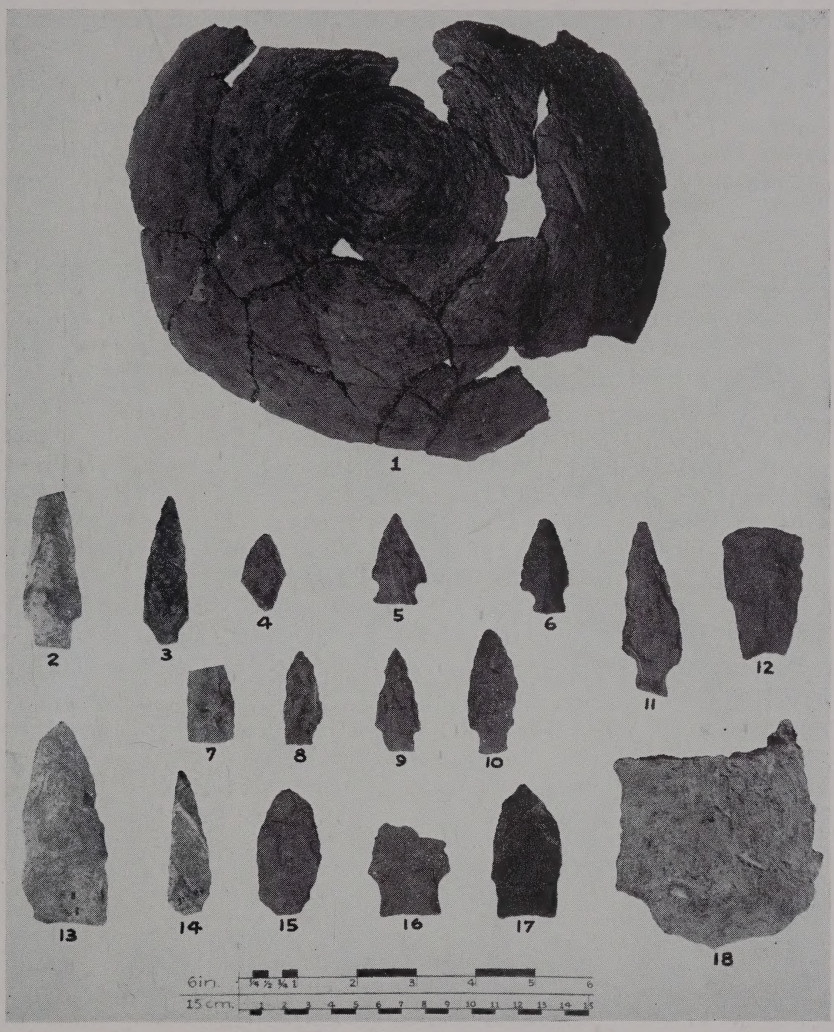

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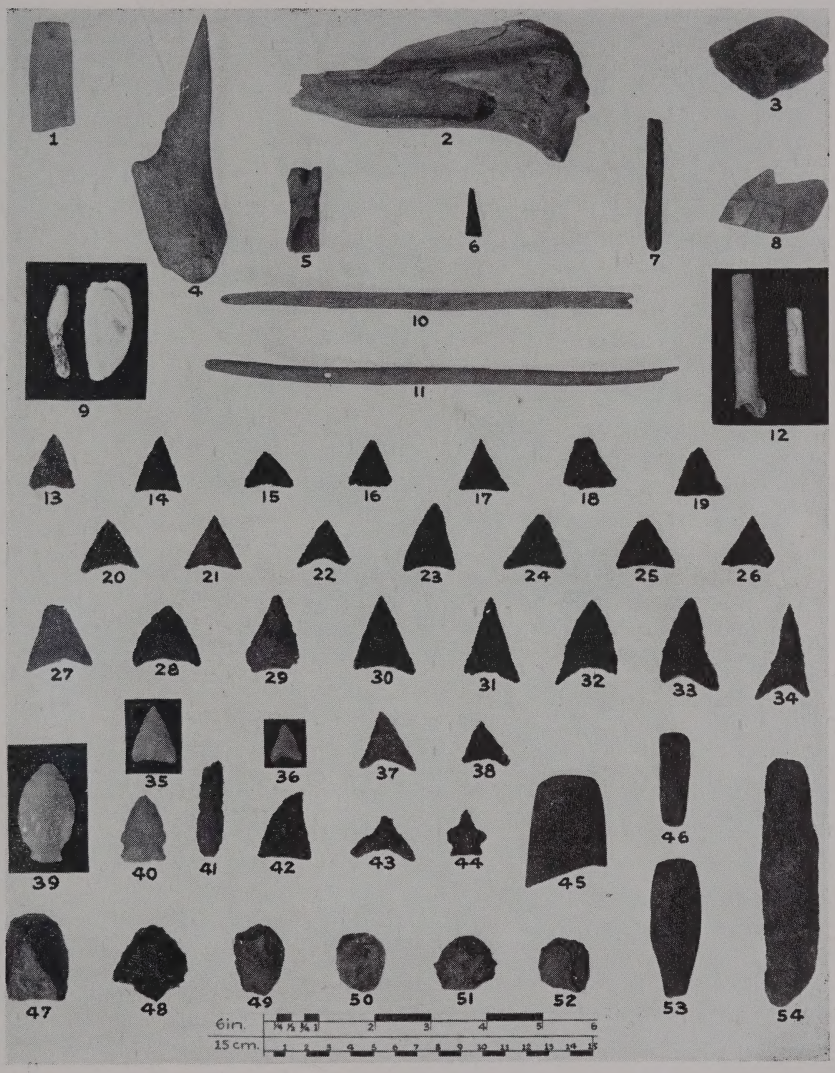
PLATE 7. BONE AND ANTLER, CHIPPED AND POLISHED STONE, AND HISTORIC PERIOD ARTIFACTS FROM THE BELL-PHILHOWER SITE

1, decorated antler comb fragment; 2, portion of bear tibia beaming tool; 3, 8, segments of box turtle receptacles; 4, deer ulna awl; 5, deer phalangeal cone; 6, brass cone or bangle; 7, antler flaker; 9, worked pieces of conch shell columella and whorl; 10, 11, bone needles; 12, kaolin pipestem fragments; 13-15, 20-28, 35-38, equilateral triangular arrow points, with concave base; 16-19, equilateral triangular arrow points, with straight base; 29, isosceles triangular arrow point, with straight base; 30-34, isosceles triangular arrow points, with concave base; 39, broad, side-notched knife; 40, broad, side-notched projectile point; 41, retouched flake side scraper; 42, asymmetric triangular knife; 43, Y-shaped base of drill; 44, drill with expanded side-notched base; 45, gorget or pendant fragment; 46, 53, 54, narrow celts or chisels; 47, keeled end scraper; 48-52, ovate end scrapers.

Provenience: Figs. 1, 54, Pit 72; fig. 2, Pit 67; figs. 3, 8, Pit 14; figs. 4, 20, 21, Pit 9; figs. 5, 27, Pit 34; figs. 6, 12, topsoil; fig. 7, Pit 36; fig. 9, Pit 24; figs. 10, 13, Pit 11; fig. 11, Pit 52; fig. 14, Pit 50; fig. 15, Pit 4; fig. 16, Pit 13; fig. 17, Pit 61; figs. 18, 37, Pit 42; fig. 19, Pit 62; figs. 22, 28, 34, Pit 16; fig. 23, Pit 1, Philhower; fig. 24, Pit 25; fig. 25, Pit 35; fig. 26, Pit 59; figs. 29, 31, Pit 70; fig. 30, Pit 44; fig. 32, Pit 2; figs. 33, 39, Pit 22; figs. 35, 36, Pit 41; fig. 38, Pit 76; figs. 40, 45, 48, Pit 4, Philhower; fig. 41, Pit 48; fig. 42, Pit 45; fig. 43, Pit 31; fig. 44, Pit 26; figs. 46, 52, Pit 65; fig. 47, Pit 43; fig. 49, Pit 49; fig. 50, Pit 37; fig. 51, Pit 71; fig. 53, Pit 77; fig. 54, Pit 72.

Material: Figs. 13-20, 22-25, 30, 31, 33, 38, 42-44, 47, 48, black chert; figs. 21, 27, 32, 53, slightly weathered argillite; figs. 26, 28, 72, unweathered argillite; figs. 29, 41, 49, yellow jasper; fig. 52, red jasper; figs. 34, 51, grey chert; figs. 35, 36, 39, white chert; fig. 37, brown chert; fig. 40, mottled grey and brown chert; fig. 45, shale; fig. 46, slate; fig. 50, chalcedony.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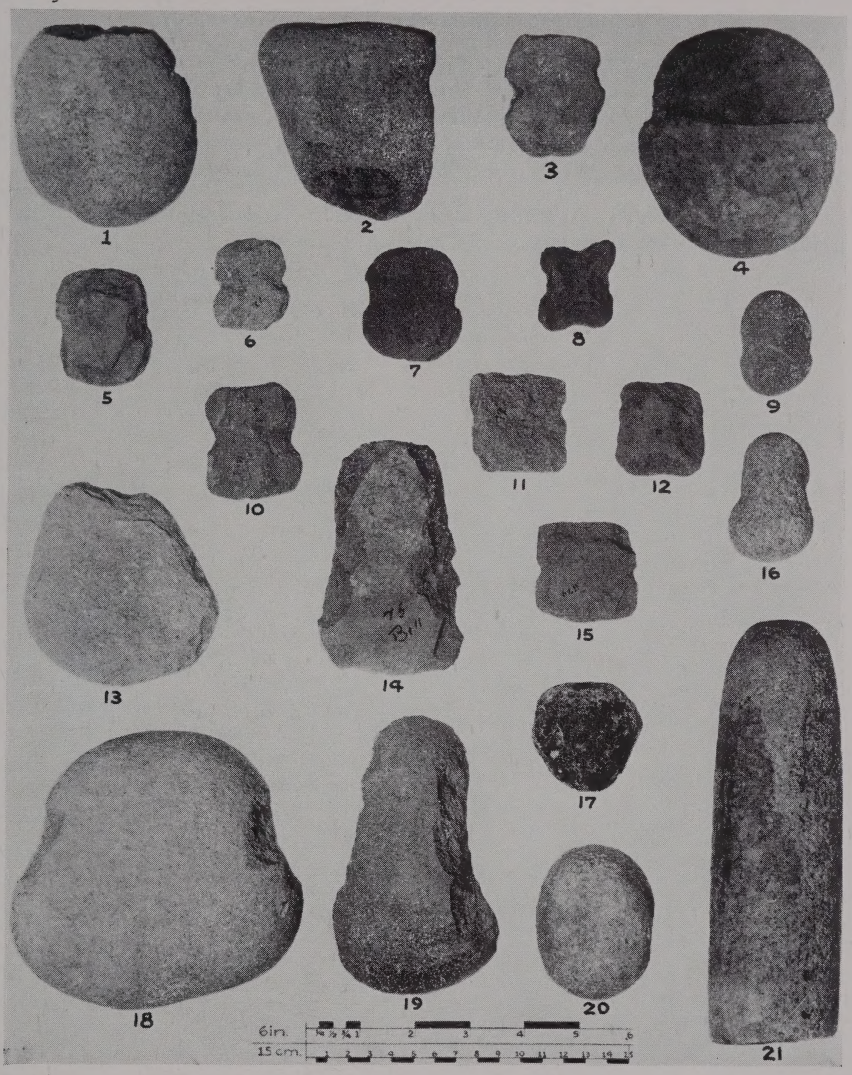
6in.
15 cm.

PLATE 8. ROUGH STONE IMPLEMENTS FROM THE BELL-PHILHOWER SITE

1, anvil stone; 2, bi-pitted stone; 3, notched flat pebble net sinker; 4, thin notched disk; 5-8, 10-12, 15, trimmed rectangular net sinkers; 9, 16, partly grooved thick pebble net sinkers; 13, 19, hoes; 14, thick polled celt, showing secondary chipping; 17, 20, unpitted pebble hammerstones; 18, notched thick pebble net sinker; 21, portion of cylindrical pestle.

Provenience: Fig. 1, Pit 4; fig. 2, Pit 1; figs. 3, 4, Pit 31; fig 5, Pit 1, Philhower; figs. 6, 11, Pit 72; fig. 7, Pit 35; figs. 8, 9, Pit 16; fig. 10, Pit 14; figs. 12, 15, Pit 24; fig. 13, Pit 33; fig. 14, Pit 75; fig. 16, Pit 48; fig. 17, Pit 46; fig. 18, Pit 8; fig. 19, Pit 63; fig. 20, Pit 69; fig. 21, Pit 62.

Material: Figs. 1-4, 6-10, 12, 13, 15, 16, 18, 20, sandstone; fig. 5, slate; figs. 11, 19, 21, quartzite; fig. 14, basalt; fig. 17, black flint.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15 cm.

PLATE 9. ARTIFACTS FROM THE BELL-PHILHOWER SITE

Fig. 1, straight pottery pipe; fig. 2, clay turtle effigy pipe bowl; fig. 3, obtuse angle elbow pipe of pottery; fig. 4, discoidal shell bead; fig. 5, steatite pendant with conventionalized human face effigy in relief; fig. 6, slate pendant; figs. 7, 8, comb tops of antler and bone, respectively; figs. 9, 10, "pattern stones" of slate and sandstone, respectively (10 is fragmentary); fig. 11, slate gorget.

Provenience: Fig. 1, Pit 22; fig. 2, Pit 9; figs. 3-11, from pits on Philhower section, found by and in collection of Charles A. Philhower.

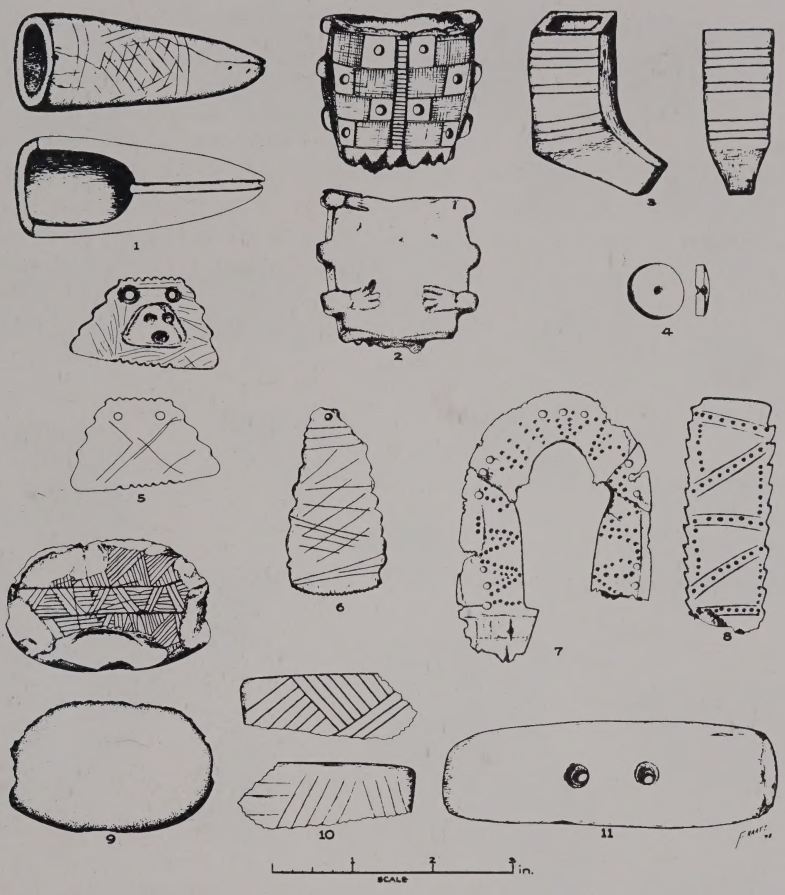
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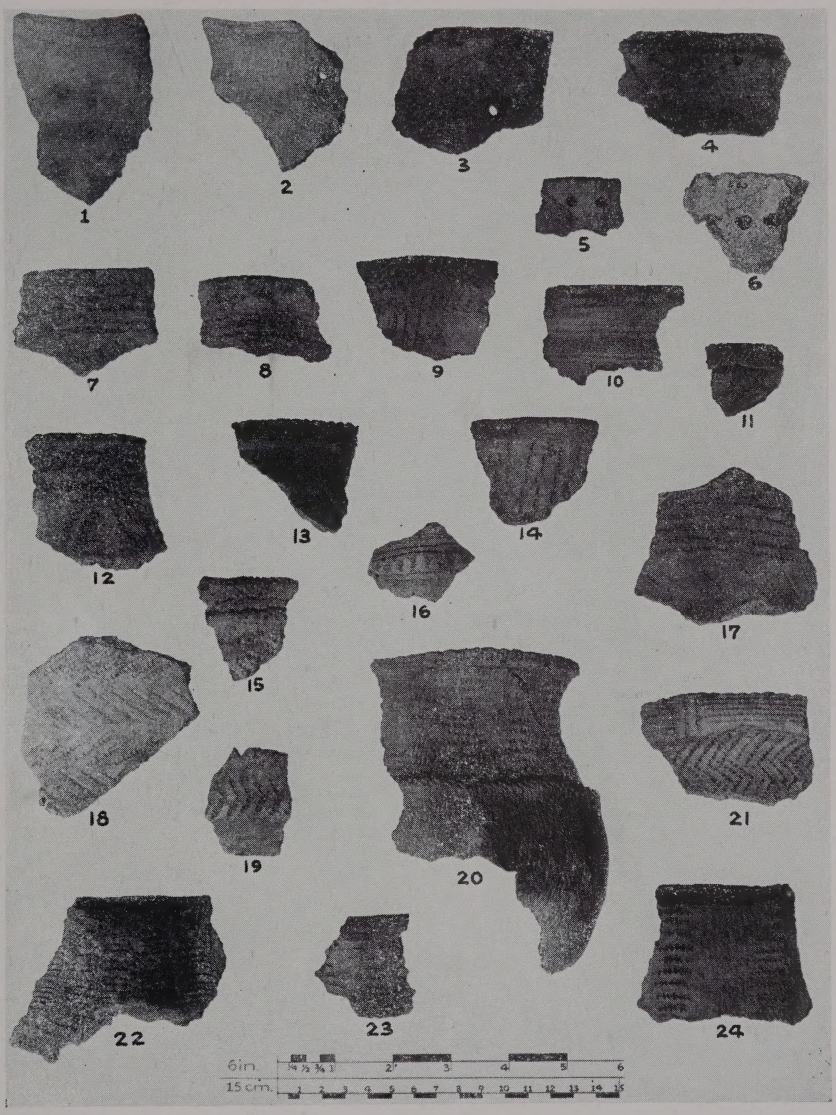
PLATE 10. POTSHERDS FROM THE BELL-PHILHOWER SITE

1, 2, 4, 5, indeterminate sherds; 3, Levanna Cord-on-Cord (?); 6, interior surface of Owasco Platted type, showing rare punctation; 7, 15, 17, 19, 21, Owasco Corded Collar type; 8, 10, Owasco Corded Horizontal type; 9, 11, Bainbridge Collared Incised type; 13, 16, Castle Creek Beaded type; 12, 14, Owasco Corded oblique type; 18, Owasco Herringbone type; 20, 22-24, Owasco Platted type.

Provenience: Fig. 1, Pit 67; fig. 2, Pit 11; fig. 4, Pit 74; figs. 6, 24, Pit 60; figs. 7, 17, Pit 4; fig. 8, Pit 23; figs. 3, 9, 11, 14, Pit 16; fig. 10, Pit 26; fig. 12, Pit 70; figs. 13, 16, 19, Pit 4, Philhower; fig. 15, Pit 22; fig. 18, Pit 42; fig. 20, Pit 64; fig. 21, Pit 44; fig. 22, Pit 45; fig. 23, Pit 6.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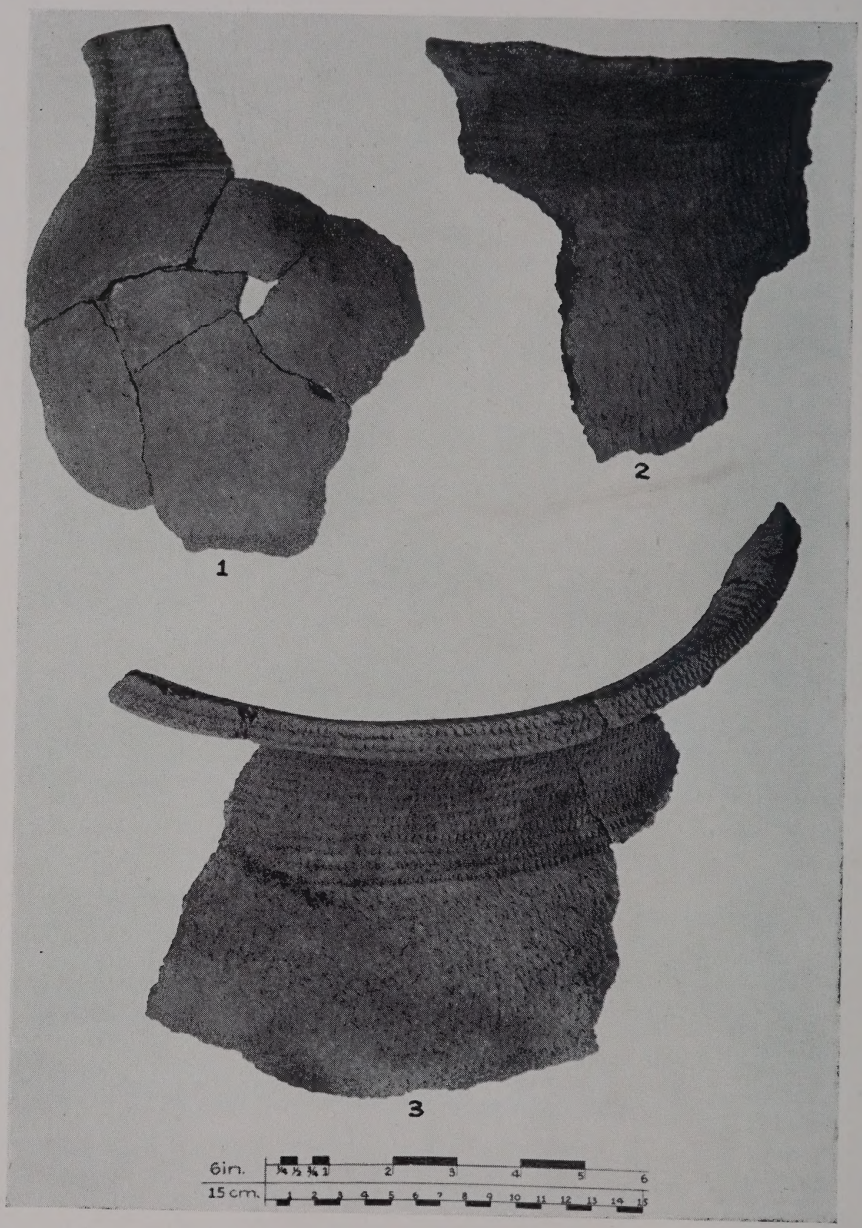


PLATE 11. POTSHERDS FROM THE BELL-PHILHOWER SITE

1, 3, Owasco Corded Horizontal type; 2, Owasco Platted type. Note fine corded body surface treatment in 2 and 3, and smoothed-over cord surfacing of fig. 1.

Provenience: Fig. 1, Pit 14; fig. 2, Pit 70; fig. 3, Pit 49.

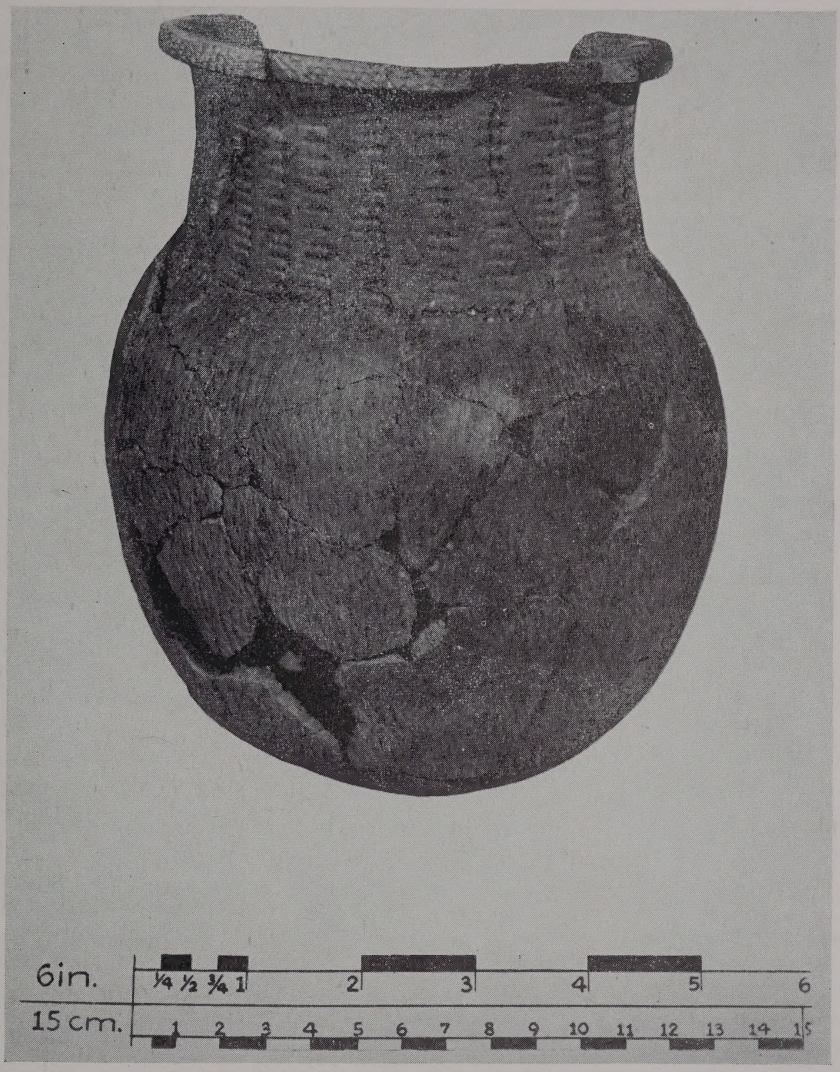
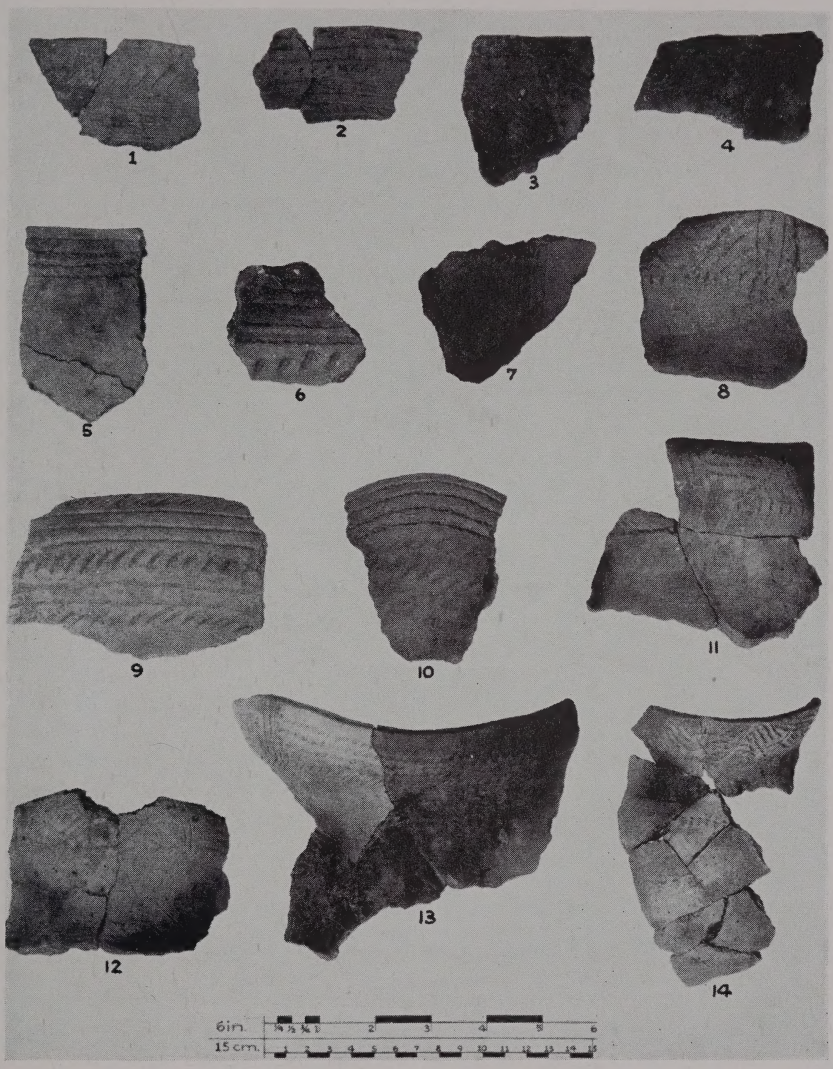


PLATE 12. RESTORED POT OF OWASCO PLATTED TYPE FROM PIT 71 ON THE BELL-PHILHOWER SITE. Tempering is fine grit.

PLATE 13. POTSHERDS OF OVERPECK INCISED, CASTLE CREEK EPIGONUS, AND INDETERMINATE FORMS FROM THE BELL-PHILHOWER SITE

1, 3, 4, 7, Overpeck Incised type; 2, indeterminate sherd; 5, 6, 8-14, Castle Creek Epigonus sherds.

Provenience: Fig. 1, Pit 9; figs. 2, 3, 7, Pit 52; fig. 4, Pit 77; figs. 5, 10, Pit 43; fig. 6, Pit 14; figs. 8, 11, Pit 3, Philhower; fig. 9, Pit 67; fig. 12, Pit 51; fig. 13, Pits 24, 26, 30; fig. 14, Pit 2, Philhower.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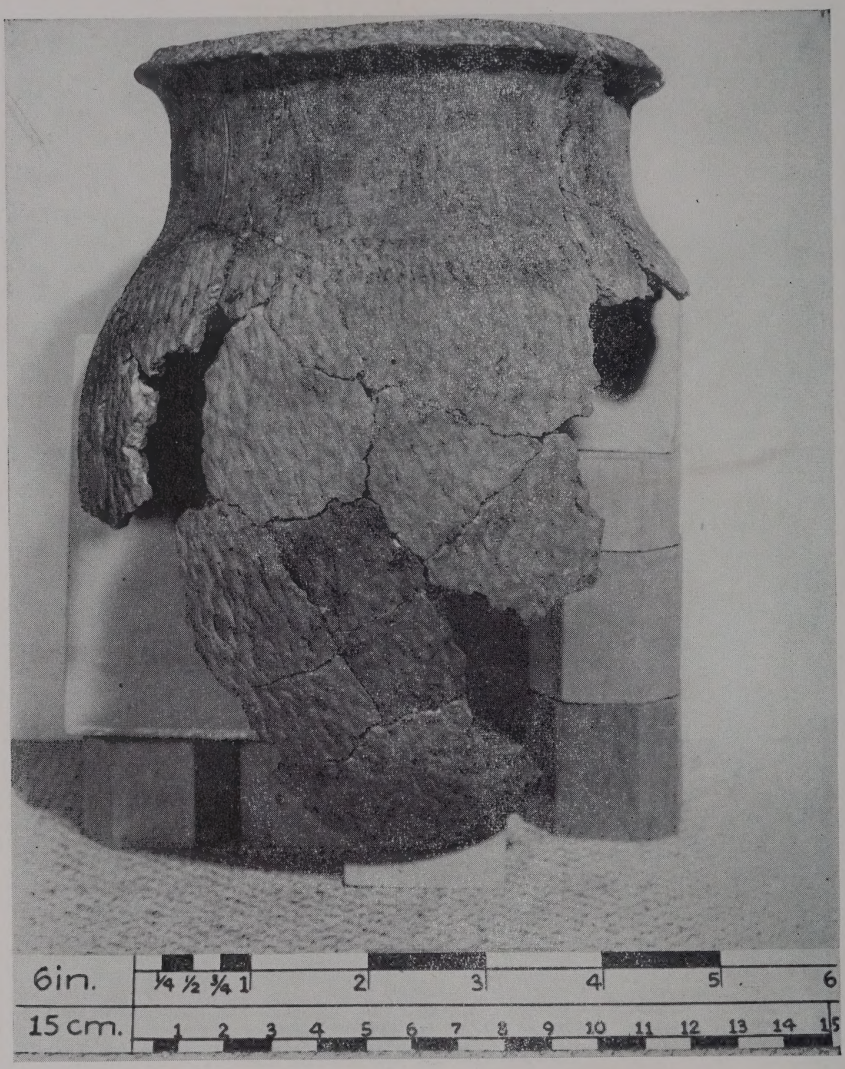


PLATE 14. RESTORED VESSEL OF INDETERMINATE TYPE FROM PIT 35 ON BELL-PHILHOWER SITE. Note partly leached out, coarse limestone tempering.

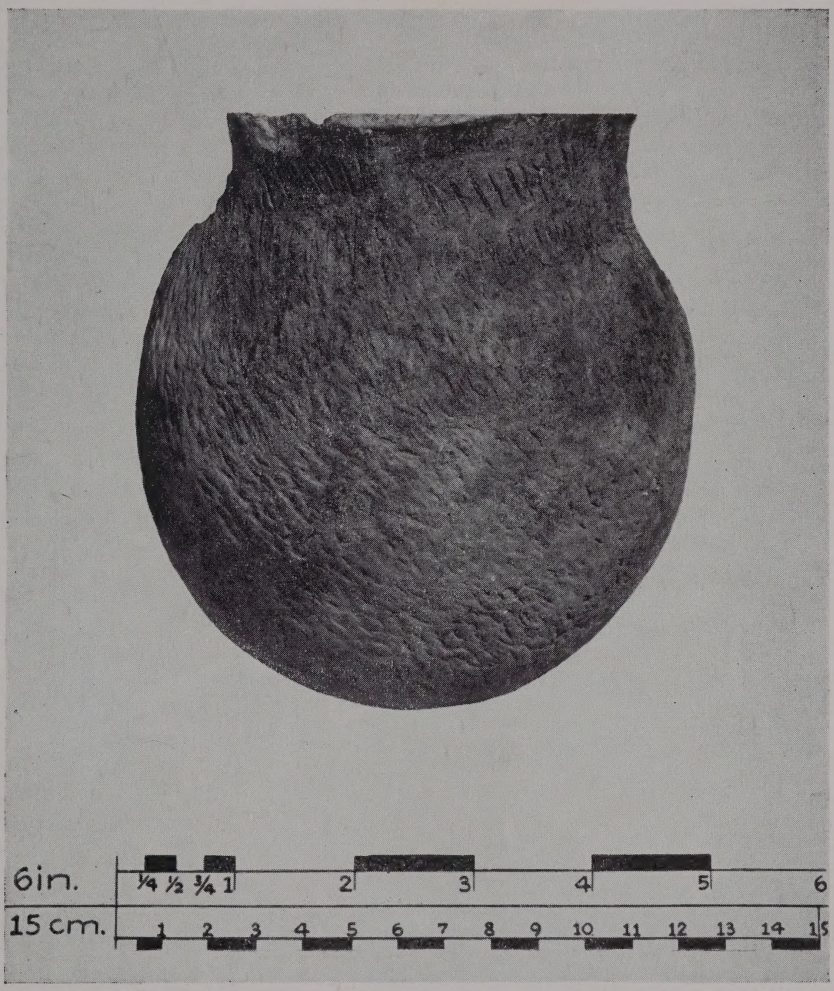
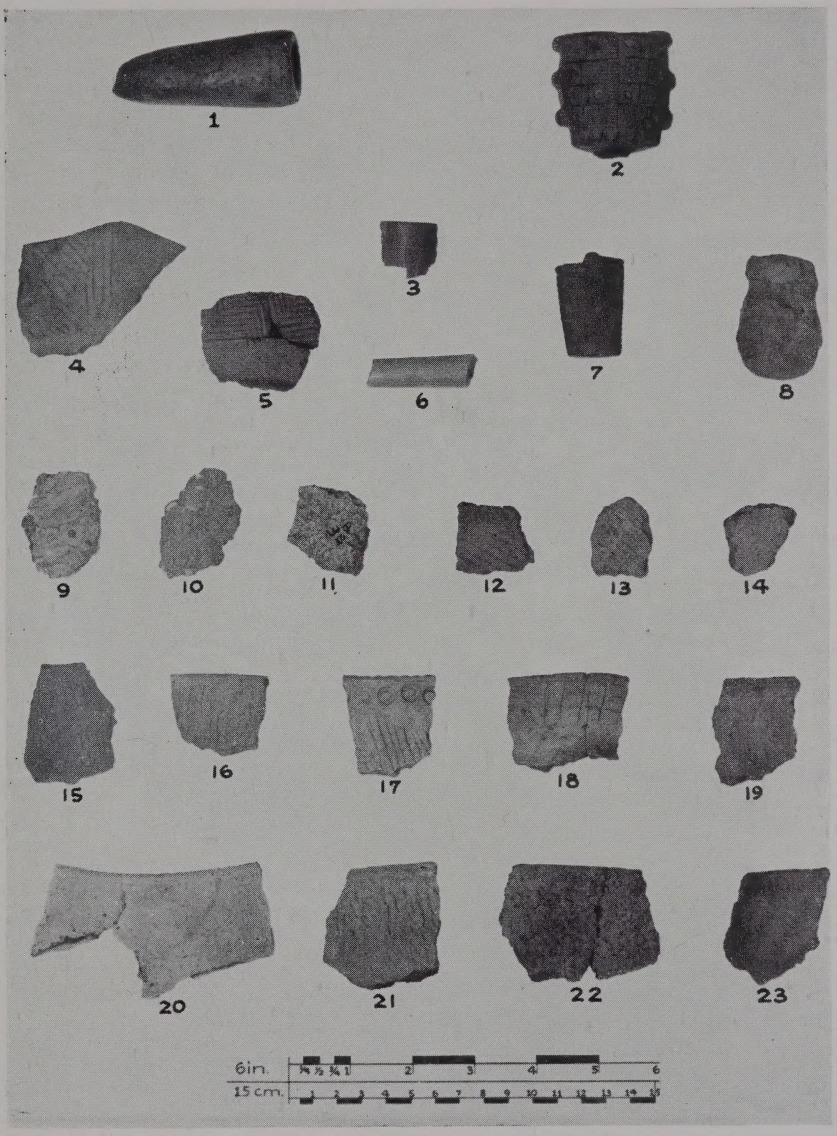


PLATE 15. NEARLY INTACT POT OF INDETERMINATE TYPE FROM PIT 35 ON BELL-PHILHOWER SITE. Tempered with medium-coarse grit aplastic.

PLATE 16. CERAMIC ARTIFACTS FROM BELL-PHILHOWER SITE

1, straight pipe ornamented with fine crisscross incisions; 2, turtle effigy pipe bowl; 3, pipe bowl fragment of polished brown paste, decorated with incised lines and pits; 4, sherd of Iroquoian pottery (Hudson Valley Incised type); 5, sherd of Overpeck Incised type; 6, pipestem fragment of polished paste, round in section, hole punched through; 7, pipestem of Owasco type, rectangular in section, edges cord marked, hole formed by burned-out twist of grass (?); 8, rude miniature pot; 9-11, body sherds of thick, coarsely grit tempered pots, corded on both surfaces, resembling Vinette 1 type; 12-14, body or neck sherds ornamented with square dentate impressions, resembling Vinette 2 ware; 15, 16, 20, straight-sided rim sherds with corded exterior, indeterminate; 17, slightly everted rim sherd with annular imprints and broad incising, indeterminate; 18, collared rim sherd decorated with incised tessellated design; 19, 21, everted rim sherds with smoothed-over cord exterior, indeterminate; 22, 23, straight-sided rim sherds with corded exterior overlaid by corded stick ornamentation, indeterminate.

Provenience: Figs. 1, 15, 23, Pit 22; figs. 2, 7, Pit 9; fig. 3, Pits 42, 80; fig. 4, Pit 13; fig. 5, Pit 26; fig. 6, Pit 19; fig. 8, Pit 54; figs. 9, 10, Pit 61; fig. 11, Pit 38; fig. 12, Pit 32; fig. 13, Pit 35; fig. 14, Pit 16; figs. 16, 19, Pit 23; fig. 17, Pit 37; fig. 18, Pit 2, Philhower; figs. 20, 21, Pit 30; fig. 22, Pit 14, Philhower.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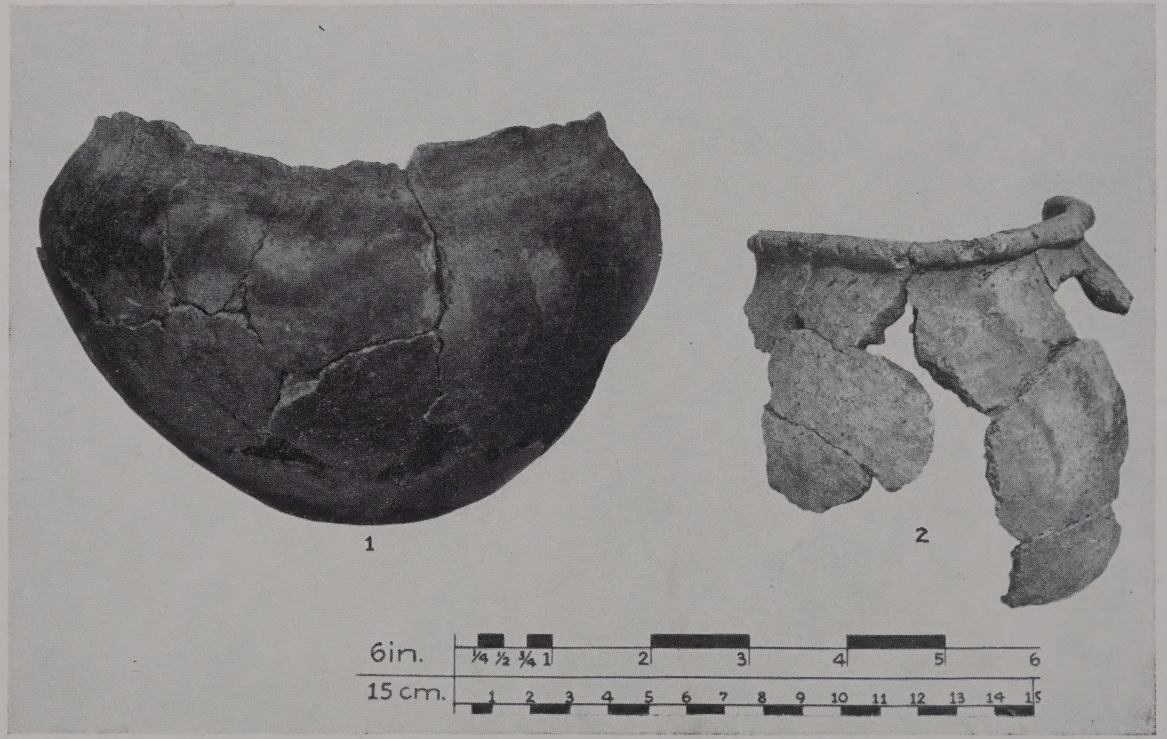

PLATE 17. INDETERMINATE POTTERY FORMS FROM BELL-PHILHOWER SITE

1, partially restored semiconical, smooth-bodied vessel from Pit 6, Philhower; 2, portion of restored globular, checked-stamp impressed vessel from Pit 1, Philhower. Both tempered with fine grit.

PLATE 18. RESTORED VESSEL OF CHANCE INCISED TYPE FROM PIT 84, BELL-PHILHOWER SITE. Smooth bodied, medium-fine grit tempered.

PLATE 19. TWO PARTLY RESTORED IROQUOIAN VESSELS FROM PIT 72, BELL-PHILHOWER SITE

1, 2, red ware, smoothed-over cord body surface, push and pull decoration; 3, smooth body, decoration in incising and linear punctation; both tempered with medium-fine grit.

PLATE 20. PORTIONS OF FOUR IROQUOIAN POTS FROM BELL-PHILHOWER SITE

1, Kingston Incised type; 2, 3, Oneida-Onondaga forms; 4, Hudson Valley Incised type. Note stylized human face effigy on rim of fig. 2. All have smooth bodies and fine grit tempering, fig. 3 with micaceous schist.

Provenience: 1, 2, 4, Pit 65; 3, Pit 50.

PLATE 21. PORTIONS OF TWO IROQUOIAN POTS FROM THE DAVENPORT AND LUDWIG SITES

1, Kingston Incised type, Pit 1, Davenport Site. Tempered with medium fine micaceous schist. 2, 3, Hudson Valley Crescent Incised type, Pit 4, Ludwig Site, Minisink Island. Medium grit temper.

Plate 22. Rim Section of Kingston Incised Type Vessel from Pit 2, Ludwig Site, Head of Minisink Island. Tempered with medium grit.

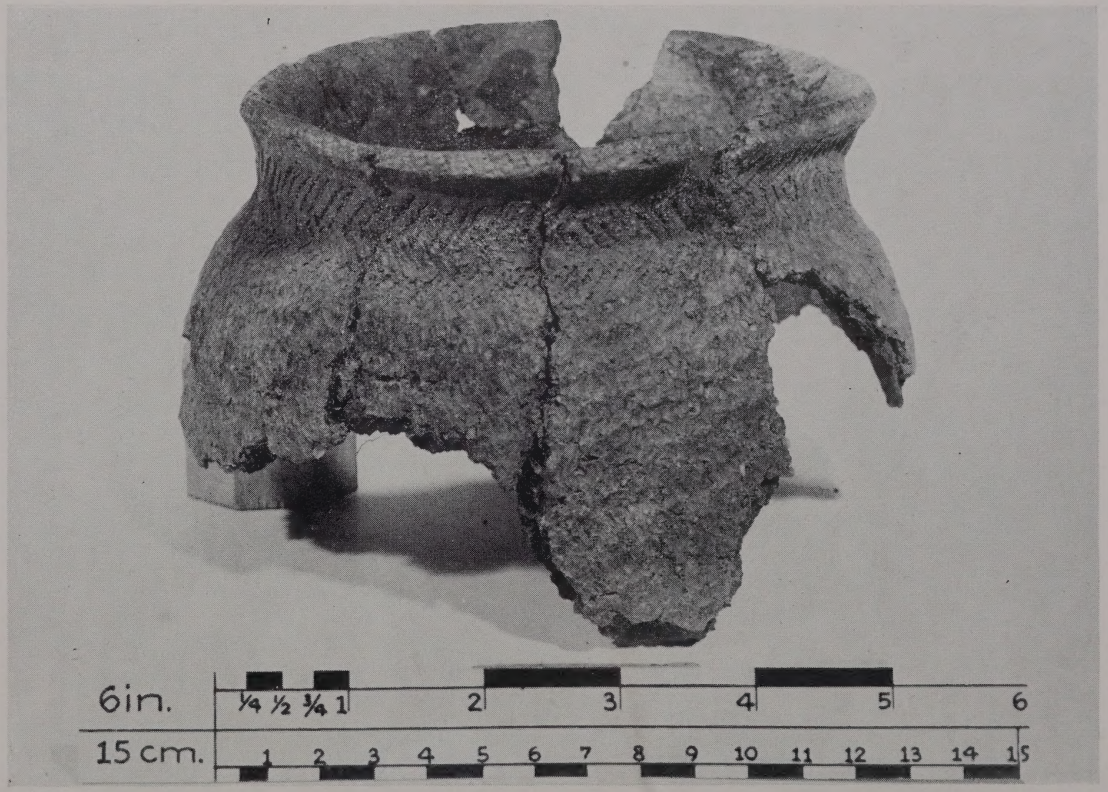

PLATE 23. UPPER PART OF THE OWASCO HERRINGBONE TYPE VESSEL FROM PIT 1, WELLING SITE. Coarse grit tempering. Entire vessel has subsequently been restored, showing globular form with rounded bottom.